

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM S-8**

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

**BullFrog AI Holdings, Inc.**

(Exact name of registrant as specified in its charter)

**Nevada**  
(State or other jurisdiction of  
incorporation or organization)

**84-4786155**  
(I.R.S. Employer  
Identification No.)

**325 Ellington Blvd, Unit 317  
Gaithersburg, MD**  
(Address of Principal Executive Offices)

**20878**  
(Zip Code)

**BullFrog AI Holdings, Inc., 2022 Equity Incentive Plan**  
(Full title of the plan)

**Vininder Singh**  
**Chief Executive Officer**  
**Bullfrog AI Holdings, Inc.**  
**325 Ellington Blvd., Unit 317**  
**Gaithersburg, MD 20878**  
**Tel: (240) 658-6710**  
(Name, address and telephone number, including area code,  
of agent for service)

*Copy to:*  
**Arthur Marcus, Esq.**  
**Sichenzia Ross Ference LLP**  
**1185 Avenue of the Americas, 31<sup>st</sup> Floor**  
**New York, NY 10036**  
**(212) 930-970**

Indicate by check mark whether the Company is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "small reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one)

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

**EXPLANATORY NOTE**

This registration statement on this Form S-8 (the "Registration Statement") relates to 1,246,607 shares of common stock, par value \$0.00001 per share ("Common Stock"), of BullFrog AI Holdings, Inc., (the "Registrant," the "Company," "we," "us" or "our"), which are issuable pursuant to, or upon exercise of, awards that have been granted or may be granted under our 2022 Equity Incentive Plan (the "2022 Plan") and upon the exercise of warrants issued to employees and consultants prior to the Company's adoption of the 2022 Plan or the exercise of options that were granted prior to adopting the 2022 Plan. Under the 2022 Plan, a total of 900,000 shares of common stock have been reserved for issuance upon the grant of awards and exercise of options to officers, directors, employees and consultants of the Company.

This Registration Statement also includes a reoffer prospectus prepared in accordance with General Instruction C of Form S-8 and in accordance with the requirements of Part I of Form S-3, to be used in connection with resales of securities registered hereunder by selling stockholders, some of whom may be considered affiliates of the Company, as defined in Rule 405 under the Securities Act of 1933, as amended (the "Selling Stockholders"). The Selling Stockholders may be selling up to an aggregate of 1,246,607 shares of common stock (adjusted to reflect the 1 for 7 reverse split effective February 13, 2023) that may constitute "restricted securities" and "control securities" which have been issued by the Registrant to executive officers or directors, prior to the filing of this Registration Statement.

**PART I**

**INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS**

The documents containing the information specified in Part I, and the Note to Part I of Form S-8 will be delivered to each of the participants in accordance with Rule 428 under the Securities Act of 1933, as amended (the “Securities Act”), but these documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, taken together, constitute a Prospectus that meets the requirements of Section 10(a) of the Securities Act.

## Item 2. Registrant Information and Employee Annual Information.

Upon written or oral request, any of the documents incorporated by reference in Item 3 of Part II of this Registration Statement (which documents are incorporated by reference in this Section 10(a) Prospectus) and other documents required to be delivered to eligible employers, non-employee directors and consultants pursuant to Rule 428(b) are available without charge by contacting Vininder Singh, Chief Executive Officer, c/o Bullfrog AI Holdings, Inc., 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878, (240) 658-6710.

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### REOFFER PROSPECTUS

1,246,607 Shares

BullFrog AI Holdings, Inc.

Common Stock

This reoffer prospectus relates to the public resale, from time to time, of an aggregate of 1,246,607 shares (the “Shares”) of our common stock, \$0.00001 par value per share, by certain security holders identified herein in the section entitled “Selling Stockholders”. The amount of Shares to be reoffered or resold by means of this prospectus by each Selling Stockholder, and any other person with whom such Selling Stockholder is acting in concert for the purpose of selling our securities, may not exceed, during any three-month period, the amount specified in Rule 144(e) of the Securities Act of 1933, as amended (the “Securities Act”). Such Shares have been or may be acquired in connection with awards granted under the 2022 Equity Incentive Plan (the “2022 Plan”) of BullFrog AI Holdings, Inc. (the “Company”), or upon the exercise of warrants issued to employees and consultants prior to the Company’s adoption of the 2022 Plan or the exercise of options that were granted prior to adopting the 2022 Plan. You should read this prospectus carefully before you invest in the common stock.

Such resales shall take place on the Nasdaq Capital Market, or such other stock market or exchange on which our common stock may be listed or quoted, in negotiated transactions or otherwise, at market prices prevailing at the time of the sale or at prices otherwise negotiated (see “Plan of Distribution” starting on page 8 of this reoffer prospectus). We will receive no part of the proceeds from sales made under this reoffer prospectus. The Selling Stockholders will bear all sales commissions and similar expenses. Any other expenses incurred by us in connection with the registration and offering and not borne by the Selling Stockholders will be borne by us.

This reoffer prospectus has been prepared for the purposes of registering the Shares under the Securities Act to allow for future sales by the Selling Stockholders on a continuous or delayed basis to the public without restriction. We have not entered into any underwriting arrangements in connection with the sale of the Shares covered by this reoffer prospectus. The Selling Stockholders identified in this reoffer prospectus, or their pledgees, donees, transferees or other successors-in-interest, may offer the Shares covered by this reoffer prospectus from time to time through public or private transactions at prevailing market prices, or at prices related to prevailing market prices or at privately negotiated prices.

Investing in our common stock involves risks. See “Risk Factors” beginning on page 5 of this reoffer prospectus. These are speculative securities.

Our common stock and tradable warrants are listed on the Nasdaq Capital Market under the symbols “BFRG” and “BFRGW”, respectively, and the last reported sale prices of our common stock and warrants on June 29, 2023 was \$3.70 and \$0.77, respectively.

**NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.**

**The date of this Prospectus is July 03, 2023**

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## CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein may contain forward looking statements within the meaning of Section 27A of the Securities Act of 1933 (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934 (the “Exchange Act”) that involve risks and uncertainties. All statements other than statements of historical fact contained in this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein, including statements regarding future events, our future financial performance, business strategy, and plans and objectives of management for future operations, are forward-looking statements. We have attempted to identify forward-looking statements by terminology including “anticipates,” “believes,” “can,” “continue,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “should,” or “will” or the negative of these terms or other comparable terminology. Although we do not make forward looking statements unless we believe we have a reasonable basis for doing so, we cannot guarantee their accuracy. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under “Risk Factors” or elsewhere in this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein, which may cause our or our industry’s actual results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Moreover, we operate in a highly regulated, very competitive, and rapidly changing environment. New risks emerge from time to time and it is not possible for us to predict all risk factors, nor can we address the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause our actual results to differ materially from those contained in any forward-looking statements.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short term and long-term business operations, and financial needs. These forward-looking statements are subject to certain risks and uncertainties that could cause our actual results to differ materially from those reflected in the forward looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein, and in particular, the risks discussed below and under the heading “Risk Factors” and those discussed in other documents we file with the Securities and Exchange Commission, or the SEC. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statement.

You should not place undue reliance on any forward-looking statement, each of which applies only as of the date of this prospectus. Except as required by law, we undertake no obligation to update or revise publicly any of the forward-looking statements after the date of this prospectus to conform our statements to actual results or changed expectations.

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## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all the information that you should consider before investing in our Company. You should carefully read the entire prospectus, including all documents incorporated by reference herein. In particular, attention should be directed to our “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the financial statements and related notes thereto contained herein or otherwise incorporated by reference hereto, before making an investment decision.*

### Corporate History and Background

BullFrog AI Holdings, Inc. was incorporated in the State of Nevada on February 18, 2020. Our principal business address is 325 Ellington Blvd, Unit 317, Gaithersburg, MD 20878. All of our operations are currently conducted through BullFrog AI Holdings, Inc. BullFrog AI, Inc., a wholly owned subsidiary acquired through a share exchange, has the sole purpose of housing and protecting all of the organization’s intellectual property. BullFrog AI Management, LLC is a wholly owned subsidiary that handles all HR and payroll activities.

### Acquisition of BullFrog AI

In March 2020, BullFrog AI, Inc. received an investment from TEDCO - the Technology Development Corporation of Maryland, a State of Maryland Investment Fund – pursuant to the issuance of a \$200,000 convertible note with an 18-month term, 6% annual interest rate, and a 20% discount. In June 2020, BullFrog AI Holdings, Inc. acquired BullFrog AI, Inc. pursuant to an exchange agreement under which each share of Bull Frog AI, Inc. common stock was exchanged for a share of common stock of BullFrog AI Holdings, Inc. Immediately prior to the share exchange, each outstanding common share of BullFrog AI, Inc. was split into 25 shares of common stock. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split and shares exchange. Pursuant to the agreement, 24,223,975 shares of the Company’s common stock were issued to the shareholders of BullFrog AI, Inc. in exchange for 100% of the outstanding stock of BullFrog AI, Inc. Upon completion of the exchange, BullFrog AI, Inc. became the Company’s wholly-owned subsidiary and the shareholders of BullFrog AI, Inc. held 100% of the common stock of the Company. As a result, BullFrog AI Holdings, Inc. assumed a total of \$330,442 in net liabilities of BullFrog AI, Inc. Both of the entities were controlled before and after the transactions by the same controlling shareholder. This transaction is being accounted for as a common control transaction and all entities are being presented as if the transactions took place at the beginning of the earliest period presented.

### BullFrog AI Corporate History

BullFrog AI, Inc. was incorporated in the State of Delaware on August 25, 2017. Vininder Singh is the founder, CEO and chairman of BullFrog AI. We have our principal executive office in 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878, and our telephone number is (240) 658-6710. The Company’s website address is <https://bullfrogai.com/>. Our website and the information contained on our website, or linked through our website, are not part of this prospectus, and you should not rely on our website or such information in making a decision to invest in our common stock. In connection with the Company’s initial public offering in February 2023, the Company effected a 7-1 reverse stock split of its common stock (the “Reverse Split”). All numbers throughout this Registration Statement on Form S-8 reflect the Reverse Split.

### Business Overview

Most new therapeutics will fail at some point in preclinical or clinical development. This is the primary driver of the high cost of developing new therapeutics. A major part of the difficulty in developing new therapeutics is efficient integration of complex and highly dimensional data generated at each stage of development to de-risk subsequent stages of the development process. Artificial Intelligence and Machine Learning (AI/ML) has emerged as a digital solution to help address this problem.

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We use artificial intelligence and machine learning to advance medicines for both internal and external projects. We are committed to increasing the probability of success and decreasing the time and cost involved in developing therapeutics. Most current AI/ML platforms still fall short in their ability to synthesize disparate, high-dimensional data for actionable insight. Our platform technology, named, bfLEAP™, is an analytical AI/ML platform derived from technology developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL), which is able to surmount the challenges of scalability and flexibility currently hindering researchers and

clinicians by providing a more precise<sup>1</sup>, multi-dimensional understanding of their data. We are deploying bfLEAP™ for use at several critical stages of development for internal programs and through strategic partnerships and collaborations with the intention of streamlining data analytics in therapeutics development, decreasing the overall development costs by decreasing failure rates for new therapeutics, and impacting the lives of countless patients that may otherwise not receive the therapies they need.

The bfLEAP™ platform utilizes both supervised and unsupervised machine learning – as such, it is able to reveal real/meaningful connections in the data without the need for a prior hypothesis. Supervised machine learning uses labeled input and output data, while an unsupervised learning algorithm does not. In supervised learning, the algorithm “learns” from the training dataset by iteratively making predictions on the data and adjusting for the correct answer. Unsupervised learning, also known as unsupervised machine learning, uses machine learning algorithms to analyze and cluster unlabeled datasets. These algorithms discover hidden patterns or data groupings without the need for human intervention. Algorithms used in the bfLEAP™ platform are designed to handle highly imbalanced data sets to successfully identify combinations of factors that are associated with outcomes of interest.

Together with our strategic partners and collaborators, our primary goal is to improve the odds of success at any stage of pre-clinical and clinical therapeutics development. Our primary business model is improving the success and efficiency of drug development which is accomplished either through acquisition of drugs or partnerships and collaborations with companies that are developing drugs. We hope to accomplish this through strategic acquisitions of current clinical stage and failed drugs for in-house development, or through strategic partnerships with biopharmaceutical industry companies. We are able to pursue our drug asset enhancement business by leveraging a powerful and proven AI/ML platform (trade name: bfLEAP™) initially derived from technology developed at JHU-APL. We believe the bfLEAP™ analytics platform is a potentially disruptive tool for analysis of pre-clinical and/or clinical data sets, such as the robust pre-clinical and clinical trial data sets being generated in translational R&D and clinical trial settings. In November 2021, we amended the agreement with JHU-APL to include additional advanced AI technology. On July 8, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology developed to enhance the bfLEAP™ platform. The July 8, 2022 JHU-APL license provides the Company with new intellectual property and also encompasses most of the intellectual property from the February 2018 license.

We believe bfLEAP™ will inform/enable decision making throughout the development cycle:

- 1. Discovery Phase – Analyze and categorize discovery phase data to better define highest-value leads from groups of candidates, for advancement to preclinical phase of development. Integrate data from high-throughput screening, pharmacodynamics assays, pharmacokinetics assays, and other key data sets to create the most accurate profile of a pool of therapeutic candidates. There is often a high degree of similarity among closely related therapeutics in a candidate pool – bfLEAP™ is able to harmonize disparate data streams for a more nuanced understanding of each candidate’s characteristics/potency.
- 2. Pre-Clinical Data - Large-scale/multivariate analysis of pre-clinical and/or early-stage clinical data sets. In these settings, bfLEAP could be used to find novel drug targets, elucidate mechanism of action (MOA), predict potential off-target effects/side effects, uncover specific genetic/phenotypic background(s) with highest correlation to therapeutic response, etc. These insights from bfLEAP™ analysis can be used to inform decision making/study design at the subsequent step(s) of therapeutic/diagnostic development, including first-in-human/Phase I RCTs.
- 3. Clinical Development - Advanced/multivariate analysis of PhI and/or PhII clinical trials data, to find niche populations of highly responsive patients and/or inform patient selection for later-stage CT(s). This can be used to decrease overall study risk for larger clinical trials - including Phase II trials, and any Phase III Registration Clinical Trials. The bfLEAP™ platform analysis can also be used to more precisely understand complex correlations between therapeutic treatment and adverse events, side effects, and other undesirable responses which could jeopardize clinical trial success.

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<sup>1</sup> In an August 2021 publication in DeepAI.org

(<https://deepai.org/publication/random-subspace-mixture-models-for-interpretable-anomaly-detection>), the algorithms used in bfLEAP were compared to 10 of the most popular clustering algorithms in the world using 12 data sets. The end result showed that the algorithms used in bfLEAP had the highest average score when measuring speed and accuracy of prediction. The bfLEAP platform currently has more advanced versions of these algorithms and is applying them in multiple data analytics projects.

Our platform is agnostic to the disease indication or treatment modality and therefore we believe that it is of value in the development of biologics or small molecules.

The process for our drug asset enhancement program is to:

- acquire the rights to a drug from a biopharmaceutical industry company or academia;
- use the proprietary bfLEAP™ AI/ML platform to determine a multi-factorial profile for a patient that would best respond to the drug;
- rapidly conduct a clinical trial to validate the drug’s use for the defined “high-responder” population; and
- divest/sell the rescued drug asset with the new information back to a large player in the pharma industry, following positive results of the clinical trial.

As part of our strategy, we will continue evolving our intellectual property, analytical platform and technologies, build a large portfolio of drug candidates, and implement a model that reduces risk and increases the frequency of cash flow from rescued drugs. This strategy will include strategic partnerships, collaborations, and relationships along the entire drug development value chain, as well as acquisitions of the rights to developing failed drugs and possibly the underlying companies.

To date, we have not conducted clinical trials on any pharmaceutical drugs and our platform has not been used to identify a drug candidate that has received regulatory approval for commercialization. However, we currently have a strategic relationship with a leading rare disease non-profit organization for AI/ML analysis of late stage clinical data. We have also positioned the Company to acquire the rights to a series of preclinical and early clinical drug assets from universities, as well as a strategic collaboration with a world renowned research institution to create a HSV1 viral therapeutic platform to engineer immunotherapies for a variety of diseases. In addition, we have signed exclusive world-wide license agreements with Johns Hopkins University for a cancer drug that targets glioblastoma (brain cancer), pancreatic cancer, and other cancers. We have also signed an exclusive worldwide license with George Washington University for another cancer drug that targets hepatocellular carcinoma (liver cancer), and other liver diseases.

Our platform was originally developed by the JHU-APL. JHU-APL uses the same technology for applications related to national defense. Over several years, the software and algorithms have been used to identify relationship, patterns, and anomalies, and make predictions that otherwise may not be found. These discoveries and insights provide an advantage when predicting a target of interest, regardless of industry or sector. We have applied the technology to various clinical data sets and have identified novel relationships that may provide new intellectual property, new drug targets, and other valuable information that may help with patient stratification for a clinical trial thereby improving the odds for success. The platform has not yet aided in the development of a drug that has reached commercialization. However, we own one drug candidate that has completed a phase 1 trial and a second candidate that is in the preclinical stages. Our aim is to use our technology on current and future available data to help us better determine the optimal path for development.

#### **Our bfLEAP™ Analytics Platform**

We are able to pursue our drug rescue business by leveraging a powerful and proven AI/ML platform (trade name: bfLEAP™) derived from technology developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL). The bfLEAP™ platform is based on an exclusive, world-wide license granted by Johns Hopkins University Applied Physics Laboratory. The license covers three (3) issued patents, as well as a new provisional patent application, non-patent rights to proprietary libraries of algorithms and other trade secrets, which also includes modifications and improvements. On July 8, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology developed to enhance the bfLEAP™ platform. The new license provides additional intellectual property rights including patents, copyrights and knowhow to be utilized under the Company’s bfLEAP™ analytical AI/ML platform. Under the terms of the new License Agreement, JHU will be entitled to eight (8%) percent of net sales for the services provided by the Company to other parties and 3% for internally development drug projects in which the JHU license

We believe the bfLEAP™ analytics platform is a potentially disruptive tool for analysis of pre-clinical and/or clinical data sets, such as the robust pre-clinical and clinical trial data sets being generated in translational R&D and clinical trial settings. The input data for bfLEAP™ can include raw data (preclinical and/or clinical readouts), categorical data, sociodemographic data of patients, and various other inputs. Thus, the bfLEAP™ platform is capable of capturing the particular genetic and physical characteristics of patients in an unbiased manner, and contextualizing it against other disparate data sources from patients (e.g. molecular data, physiological data, etc.) for less biased and more meaningful conclusions. It is also uniquely scalable – the bfLEAP™ platform is able to perform analysis on large, high-volume data sets (i.e. ‘big data’) and also able to analyze highly disparate “short and wide” data as well. In terms of visualization, bfLEAP™ is able to integrate with most commonly used visualization tools for graph analytics.

We believe that the combination of a) scalable analytics (i.e., large data or short/wide data), b) state-of-the-art proprietary algorithms, c) unsupervised machine learning, and d) streamlined data ingestion/visualization makes bfLEAP™ one of the most flexible and powerful new platforms available on the market.

The Company will continue to evolve and improve bfLEAP™, and some of the proceeds from this offering may be used toward that effort either in-house or with development partners like The Johns Hopkins University Applied Physics Lab.

#### RISK FACTORS

An investment in our common stock involves risks. Prior to making a decision about investing in our common stock, you should consider carefully all of the information contained or incorporated by reference in this prospectus, including any risks in the section entitled “Risk Factors” contained in any supplements to this prospectus, our Registration Statement on Form S-1 (File No. 333-267951), as amended to date, our most recent Annual Report on Form 10-K as supplemented and updated by subsequent quarterly reports on Form 10-Q and current reports on Form 8-K that we have filed or will file with the SEC, which are incorporated by reference into this prospectus. Each of the referenced risks and uncertainties could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities. Additional risks not known to us or that we believe are immaterial may also adversely affect our business, operating results and financial condition and the value of an investment in our securities.

#### USE OF PROCEEDS

The shares which may be sold under this reoffer prospectus will be sold for the respective accounts of each of the Selling Stockholders listed herein (which includes our officers and directors). Accordingly, we will not realize any proceeds from the sale of the Shares. We will receive proceeds from the exercise of the options; however, no assurance can be given as to when or if any or all of the options will be exercised. If any options are exercised on a cash basis, the proceeds derived therefrom will be used for working capital and general corporate purposes. All of the warrants and options are exercisable on a cashless basis. All expenses of the registration of the Shares will be paid by us. See “Selling Stockholders” and “Plan of Distribution.”

#### SELLING STOCKHOLDERS

We are registering for resale the Shares covered by this reoffer prospectus to permit the Selling Stockholders identified below and their pledgees, donees, transferees and other successors-in-interest that receive their securities from a Selling Stockholder as a gift, partnership distribution or other non-sale related transfer after the date of this prospectus to resell the Shares when and as they deem appropriate. The Selling Stockholders may acquire these Shares from us pursuant to the 2022 Plan. The Shares may not be sold or otherwise transferred by the Selling Stockholders unless and until the applicable awards vest and are exercised, as applicable, in accordance with the terms and conditions of the 2022 Plan.

The following table sets forth:

- the name of each Selling Stockholder;
- the number and percentage of shares of our common stock that each Selling Stockholder beneficially owned as of June 29, 2023 prior to the offering for resale of the Shares under this prospectus;
- the number of Shares that may be offered for resale for the account of each Selling Stockholder under this prospectus; and
- the number and percentage of shares of our common stock to be beneficially owned by each Selling Stockholder after the offering of the resale Shares (assuming all of the offered resale Shares are sold by such Selling Stockholder).

Information with respect to beneficial ownership is based upon information obtained from the Selling Stockholders. Because the Selling Stockholders may offer all or part of the Shares, which they own pursuant to the offering contemplated by this reoffer prospectus, and because its offering is not being underwritten on a firm commitment basis, no estimate can be given as to the amount of Shares that will be held upon termination of this offering. Except where indicated, all options and warrants held by the selling stockholders are exercisable within 60 days of June 29, 2023.

The number of shares in the column “Number of Shares Being Offered Hereby” represents all of the Shares of our common stock that each Selling Stockholder may offer under this prospectus. We do not know how long the Selling Stockholders will hold the Shares before selling them or how many Shares they will sell. The Shares of our common stock offered by this prospectus may be offered from time to time by the Selling Stockholders listed below. We cannot assure you that any of the Selling Stockholders will offer for sale or sell any or all of the Shares of common stock offered by them by this prospectus.

<u>Name of Selling Stockholder</u>	<u>Number of Shares Beneficially Owned Prior to the Offering (1)</u>	<u>Number of Shares Being Offered Hereby (2)</u>	<u>Number of Shares Beneficially Owned Upon Completion of the Offering</u>	<u>Percentage of Shares to be Beneficially Owned Upon Completion of the Offering (3)</u>
Alan Alfano	19,642(4)	19,642(4)	19,642	*
Arthur Marcus	4,285(5)	4,285(5)	4,285	*
Bill Enright	19,445(6)	40,000(7)	45,000	*
Bill (William) Hirschman	101,959(8)	144,217(9)	144,217	2.37%

Bryan Poltilove	7,856(10)	7,856(10)	7,856	*
Cetin Savkli	71,151(11)	93,570(12)	93,570	1.54%
Dane Saglio	94,646(13)	132,142(14)	132,142	2.17%
David Recker	8,928(15)	10,714(16)	10,714	*
Don Elsey	14,445	40,000(17)	40,000	*
Eric Roos	7,856(18)	7,856(18)	7,856	*
Gregory Riggins	3,642(19)	5,142(20)	5,142	*
Jason Hanson	14,445	40,000(21)	40,000	*
Jeff Stacey	627	7,500(22)	7,500	*
Jim Beury	627	7,500(23)	7,500	*
JT Koffenberger	15,237(24)	23,570(25)	23,570	*
Kristi Bigos	59,105(26)	65,355(27)	65,355	1.07%
Margarita Aguilera	4,285(28)	4,285(28)	4,285	*
Raj Khera	1,071(29)	1,071(29)	1,071	*
Remco Foppen	6,547(30)	6,547(30)	6,547	*
Sanjay Vashee	1,190(31)	1,428(32)	1,428	*
Steven Seegers	2,478(33)	4,142(34)	4,142	*
Thomas Hazel	13,779(35)	29,285(36)	29,285	*
Toby Sayre	3,333	30,000(37)	30,000	*

\* Indicates less than 1%.

- (1) Includes shares noted under “Number of Shares Being Offered Hereby”
- (2) Represents shares of stock issuable upon exercise of outstanding stock options.
- (3) Based on 6,094,644 shares issued and outstanding as of June 29, 2023.
- (4) Shares issuable upon exercise of warrants.
- (5) Shares issuable upon exercise of warrants.
- (6) Includes 5,000 shares of common stock issued and outstanding.
- (7) Includes 25,555 options that will vest in the future and excludes the 5,000 shares of common stock issued and outstanding.
- (8) Includes 24,523 shares issuable upon exercise of warrants, and 39,932 options vested under the old plan.
- (9) Includes 37,496 options that will vest in the future and 4,762 warrants that will vest in the future.
- (10) Includes 714 shares issuable upon exercise of warrants, and 7,142 options vested under the old plan.
- (11) Includes 68,649 shares issuable upon exercise of warrants.
- (12) Includes 12,498 options that will vest in the future and 9,921 warrants that will vest in the future.
- (13) Includes 57,142 shares of common stock issued and outstanding including 5,000 shares of common stock held by each of his two children.
- (14) Includes 37,496 options that will vest in the future.
- (15) Shares issuable upon exercise of warrants.
- (16) Includes 1,786 warrants that will vest in the future.
- (17) Includes 25,555 options that will vest in the future.
- (18) Includes 714 shares issuable upon exercise of warrants, and 7,142 options vested under the old plan.
- (19) Shares issuable upon exercise of warrants.
- (20) Includes 1,500 warrants that will vest in the future.
- (21) Includes 25,555 options that will vest in the future.
- (22) Includes 6,873 options that will vest in the future.
- (23) Includes 6,873 options that will vest in the future.
- (24) Includes 13,570 shares issuable upon exercise of warrants.
- (25) Includes 8,333 options that will vest in the future.
- (26) Includes 14,285 shares issuable upon exercise of warrants, and 28,570 options vested under the old plan.
- (27) Includes 6,250 options that will vest in the future.
- (28) Shares issuable upon exercise of warrants.
- (29) Shares issuable upon exercise of warrants.
- (30) Shares issuable upon exercise of warrants.
- (31) Shares issuable upon exercise of warrants.
- (32) Includes 238 warrants that will vest in the future.
- (33) Includes 2,142 shares issuable upon exercise of warrants.
- (34) Includes 1,664 warrants that will vest in the future.
- (35) Includes 11,904 shares issuable upon exercise of warrants.
- (36) Includes 13,125 options that will vest in the future and 2,381 warrants that will vest in the future.
- (37) Includes 26,667 options that will vest in the future.

#### PLAN OF DISTRIBUTION

Our common stock and tradable warrants are listed on the Nasdaq Capital Market under the symbols “BFRG” and “BFRGW”, respectively.

The Selling Stockholders will act independently of us in making decisions with respect to the timing, manner and size of each and any sale.

The Selling Stockholders may, from time to time, sell all or a portion of the Shares on any market where our common stock may be listed or quoted (currently the Nasdaq Capital Market), in privately negotiated transactions or otherwise. Such sales may be at fixed prices prevailing at the time of sale, at prices related to the market prices or at negotiated prices. The Shares being offered for resale by this Prospectus may be sold by the Selling Stockholders by one or more of the following methods:

- block trades in which the broker or dealer so engaged will attempt to sell the Shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by broker or dealer as principal and resale by the broker or dealer for its account pursuant to this prospectus;
- an exchange distribution in accordance with the rules of the applicable exchange;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;

- privately negotiated transactions;
- market sales (both long and short to the extent permitted under the federal securities laws);
- at the market to or through market makers or into an existing market for the Shares;
- through transactions in options, swaps or other derivatives (whether exchange listed or otherwise); and
- a combination of any of the aforementioned methods of sale.

The Selling Stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledge or secured parties may offer and sell the shares of common stock from time to time under this prospectus after we have filed an amendment to this prospectus under Rule 424(b)(3) or any other applicable provision of the Securities Act amending the list of stockholders to include the pledge, transferee or other successors in interest as Selling Stockholders under this prospectus.

In effecting sales, brokers and dealers engaged by the Selling Stockholders may arrange for other brokers or dealers to participate. Brokers or dealers may receive commissions or discounts from a Selling Stockholder or, if any of the broker-dealers act as an agent for the purchaser of such Shares, from a purchaser in amounts to be negotiated which are not expected to exceed those customary in the types of transactions involved. Broker-dealers may agree with a Selling Stockholder to sell a specified number of the Shares at a stipulated price per Share. Such an agreement may also require the broker-dealer to purchase as principal any unsold Shares at the price required to fulfill the broker-dealer commitment to the Selling Stockholder if such broker-dealer is unable to sell the Shares on behalf of the Selling Stockholder. Broker-dealers who acquire Shares as principal may thereafter resell the Shares from time to time in transactions which may involve block transactions and sales to and through other broker-dealers, including transactions of the nature described above. Such sales by a broker-dealer could be at prices and on terms then prevailing at the time of sale, at prices related to the then-current market price or in negotiated transactions. In connection with such resales, the broker-dealer may pay to or receive from the purchasers of the Shares commissions as described above.

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The Selling Stockholders and any broker-dealers or agents that participate with the Selling Stockholders in the sale of the Shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with these sales. In that event, any commissions received by the broker-dealers or agents and any profit on the resale of the Shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

From time to time, any of the Selling Stockholders may pledge its Shares pursuant to the margin provisions of customer agreements with brokers. Upon a default by a Selling Stockholder, their broker may offer and sell the pledged Shares from time to time. Upon a sale of the Shares, the Selling Stockholders intend to comply with the Prospectus delivery requirements under the Securities Act by delivering a Prospectus to each purchaser in the transaction. We intend to file any amendments or other necessary documents in compliance with the Securities Act which may be required in the event any of the Selling Stockholders defaults under any customer agreement with brokers.

To the extent required under the Securities Act, a post-effective amendment to this Registration Statement will be filed disclosing the name of any broker-dealers, the number of Shares, the price at which the Shares are to be sold, the commissions paid or discounts or concessions allowed to such broker-dealers, where applicable, that such broker-dealers did not conduct any investigation to verify the information set out or incorporated by reference in this Prospectus and other facts material to the transaction. We and the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations under it, including, without limitation, Rule 10b-5 and, insofar as a Selling Stockholder is a distribution participant and we, under certain circumstances, may be a distribution participant, under Regulation M.

All of the foregoing may affect the marketability of the common stock.

Any commissions, discounts or other fees payable to brokers or dealers in connection with any sale of the Shares will be borne by the Selling Stockholders, the purchasers participating in such transaction, or both.

Any Shares covered by this Prospectus which qualify for sale pursuant to Rule 144 under the Securities Act, as amended, may be sold under Rule 144 rather than pursuant to this Prospectus.

## LEGAL MATTERS

The validity of the issuance of the Shares described in this Prospectus will be passed upon for us by Sichenzia Ross Ference LLP at 1185 Avenue of the Americas, 3<sup>rd</sup> Floor, New York, NY 10036.

## EXPERTS

The consolidated financial statements of the Company and its subsidiaries, as of and for the years ended December 31, 2022 and December 31, 2021, have been incorporated by reference in this prospectus in reliance upon the report of M&K CPAS, PLLC, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

## INCORPORATION OF DOCUMENTS BY REFERENCE

We are “incorporating by reference” in this Prospectus certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this Prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this Prospectus will automatically update and supersede information contained in this Prospectus, including information in previously filed documents or reports that have been incorporated by reference in this Prospectus, to the extent the new information differs from or is inconsistent with the old information. We incorporate by reference the following information or documents that we have filed with the SEC (excluding those portions of any Form 8-K that are not deemed “filed” pursuant to the General Instructions of Form 8-K):

- Our Annual Report on Form 10-K for the fiscal year ended [December 31, 2022](#), filed with the SEC on April 25, 2023;
- Our Quarterly Report on Form 10-Q for the quarter ended [March 31, 2023](#), filed with the SEC on May 24, 2023;
- Our Current Reports on Form 8-K filed with the SEC on [June 9, 2023](#); [June 5, 2023](#); [May 26, 2023](#) and [April 25, 2023](#); and
- The description of certain capital stock contained in our Registration Statement on [Form S-1](#) filed on October 19, 2022, as amended from time to time.

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Any information in any of the foregoing documents will automatically be deemed to be modified or superseded to the extent that information in this Prospectus supplement or the accompanying prospectus or in a later filed document that is incorporated or deemed to be incorporated herein by reference modifies or replaces such information.

We also incorporate by reference any future filings (excluding information furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, until we sell all of the securities offered by this Prospectus supplement. Information in such future filings updates and supplements the information provided in this Prospectus supplement. Any statements in any such future filings will

automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost (other than exhibits, unless such exhibits are specifically incorporate by reference), by contacting Vininder Singh, Chief Executive Officer, c/o Bullfrog AI Holdings, Inc., 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878. Our telephone number is 240-658-6710. Information about us is also available at our website at <https://bullfrogai.com/>. The information in our website is not a part of this prospectus and is not incorporated by reference.

#### **DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES**

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant, the registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

#### **WHERE YOU CAN FIND MORE INFORMATION**

We have filed with the SEC under the Securities Act a Registration Statement on Form S-8, of which this Prospectus forms a part, with respect to the Shares being offered in this offering. This Prospectus does not contain all of the information set forth in the Registration Statement, certain items of which are omitted in accordance with the rules and regulations of the SEC. The omitted information may be inspected and copied at the Public Reference Room maintained by the SEC at 100 F. Street, N.E., Washington, D.C. 20549. You can obtain information about operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file with the SEC (including exhibits to such documents) at the SEC's Public Reference Room at 100 F. Street, N.E., Room 1580, Washington, D.C. 20549. You may obtain additional information about the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains a site on the Internet at <http://www.sec.gov/> that contains reports, proxy statements and other information that we file electronically with the SEC.

Statements contained in this Prospectus as to the contents of any contract or other document filed as an exhibit to the Registration Statement are not necessarily complete and in each instance reference is made to the copy of the document filed as an exhibit to the Registration Statement, each statement made in this Prospectus relating to such documents being qualified in all respect by such reference. For further information with respect to us and the securities being offered hereby, reference is hereby made to the Registration Statement, including the exhibits thereto.

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#### **REOFFER PROSPECTUS**

**BullFrog AI Holdings Inc.**

**1,246,607 shares of  
Common Stock**

**July 03, 2023**

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#### **PART II**

#### **INFORMATION REQUIRED IN THE REGISTRATION STATEMENT**

##### **Item 3. Incorporation of Documents by Reference.**

We are "incorporating by reference" in this Prospectus certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this Prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this Prospectus will automatically update and supersede information contained in this Prospectus, including information in previously filed documents or reports that have been incorporated by reference in this Prospectus, to the extent the new information differs from or is inconsistent with the old information. We incorporate by reference the following information or documents that we have filed with the SEC (excluding those portions of any Form 8-K that are not deemed "filed" pursuant to the General Instructions of Form 8-K):

- Our Annual Report on Form 10-K for the fiscal year ended [December 31, 2022](#), filed with the SEC on April 25, 2023;
- Our Quarterly Report on Form 10-Q for the quarter ended [March 31, 2023](#), filed with the SEC on May 24, 2023;
- Our Current Reports on Form 8-K filed with the SEC on [June 9, 2023](#); [June 5, 2023](#); [May 26, 2023](#) and [April 25, 2023](#); and
- The description of certain capital stock contained in our Registration Statement on [Form S-1](#) filed on October 19, 2022, as amended from time to time.

Any information in any of the foregoing documents will automatically be deemed to be modified or superseded to the extent that information in this Prospectus supplement or the accompanying prospectus or in a later filed document that is incorporated or deemed to be incorporated herein by reference modifies or replaces such information.

We also incorporate by reference any future filings (excluding information furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, until we sell all of the securities offered by this Prospectus supplement. Information in such future filings updates and supplements the information provided in this Prospectus supplement. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost (other than exhibits, unless such exhibits are specifically incorporate by reference), by contacting Vininder Singh, Chief Executive Officer, c/o Bullfrog AI Holdings, Inc., 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878. Our telephone number is 240-658-6710. Information about us is also available at our website at <https://bullfrogai.com/>. The information in our website is not a part of this prospectus and is not incorporated by reference.

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##### **Item 4. Description of Securities.**



Not applicable.

#### Item 5. Interests of Named Experts and Counsel.

Our counsel, Arthur Marcus beneficially owns 4,285 shares of common stock, issuable upon exercise of warrants.

#### Item 6. Indemnification of Directors and Officers.

Nevada law provides that a Nevada corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation (i.e., a “non-derivative proceeding”), by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including attorneys’ fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with the action, suit or proceeding if he or she:

- Is not liable under Section 78.138 of the Nevada Revised Statutes for breach of his or her fiduciary duties to the corporation; or
- Acted in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

In addition, a Nevada corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor (i.e., a “derivative proceeding”), by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses, including amounts paid in settlement and attorneys’ fees actually and reasonably incurred by him or her in connection with the defense or settlement of the action or suit if he:

- Is not liable under Section 78.138 of the Nevada Revised Statute for breach of his or her fiduciary duties to the corporation; or
- Acted in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation.

Under Nevada law, indemnification may not be made for any claim, issue or matter as to which such a person has been adjudged by a court of competent jurisdiction, after exhaustion of all appeals therefrom, to be liable to the corporation or for amounts paid in settlement to the corporation, unless and only to the extent that the court in which the action or suit was brought or other court of competent jurisdiction determines upon application that in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for such expenses as the court deems proper.

NRS Section 78.747 provides that except as otherwise provided by specific statute, no director or officer of a corporation is individually liable for a debt or liability of the corporation, unless the director or officer acts as the alter ego of the corporation. The court as a matter of law must determine the question of whether a director or officer acts as the alter ego of a corporation.

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To the extent that a director, officer, employee or agent of a corporation has been successful on the merits or otherwise in defense of any non-derivative proceeding or any derivative proceeding, or in defense of any claim, issue or matter therein, the corporation is obligated to indemnify him or her against expenses, including attorneys’ fees, actually and reasonably incurred in connection with the defense.

Further, Nevada law permits a Nevada corporation to purchase and maintain insurance or to make other financial arrangements on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise for any liability asserted against him or her and liability and expenses incurred by him or her in his or her capacity as a director, officer, employee or agent, or arising out of his or her status as such, whether or not the corporation has the authority to indemnify him or her against such liability and expenses.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

The Company plans to enter into an underwriting agreement in connection with this offering that provides that the underwriter is obligated, under some circumstances, to indemnify the Company’s directors, officers and controlling persons against specified liabilities, including liabilities under the Securities Act.

#### Item 7. Exemption From Registration Claimed.

The grant of our securities were issued as compensation awards or as enticement or incentive awards. These grants were exempt from registration pursuant to Section 4(2) of the Securities Act.

#### Item 8. Exhibits.

Exhibit No.	Description
4.1	<a href="#">2022 Equity Incentive Plan (filed as Exhibit 10.10 to the Company’s Annual Report on Form 10-K filed with the SEC on April 25, 2023 and incorporated herein by reference)</a>
5.1*	<a href="#">Opinion of Sichenzia Ross Ference LLP</a>
23.1*	<a href="#">Consent of M&amp;K CPAS, PLLC</a>
23.3*	<a href="#">Consent of Sichenzia Ross Ference LLP (included in Exhibit 5.1)</a>
24.1	<a href="#">Power of Attorney (included on the signature page to this Form S-8)</a>
107	<a href="#">Filing fee table</a>

\* Filed herewith

**Item 9. Undertakings.**

(a) The undersigned Company hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the SEC by the Company pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Company hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in Gaithersburg, Maryland on the 3rd day of July, 2023.

BULLFROG AI HOLDINGS, INC.

By: /s/ Vininder Singh

Vininder Singh  
Chief Executive Officer

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Vininder Singh their true and lawful attorneys-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments, to this Registration Statement on Form S-8, and to file the same, with exhibits thereto and other documents in connection therewith, with the SEC granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorney-in-fact and agent, or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

<u>Name</u>	<u>Position</u>	<u>Date</u>
<u>/s/ Vininder Singh</u> Vininder Singh	Chief Executive Officer and Chairman (Principal Executive Officer)	July 03, 2023
<u>/s/ Dane Saglio</u> Dane Saglio	Chief Financial Officer (Principal Financial and Accounting Officer)	July 03, 2023
<u>/s/ Don Elsey</u> Don Elsey	Director	July 03, 2023

/s/ William Enright

Director

July 03, 2023

William Enright

/s/ Jason Hanson

Director

July 03, 2023

Jason Hanson



June 30, 2023

**VIA ELECTRONIC TRANSMISSION**

BullFrog AI Holdings, Inc.  
325 Ellington Blvd, Unit 317  
Gaithersburg, Maryland

**RE: BULLFROG AI HOLDINGS, INC.  
Form S-8 Registration Statement**

Ladies and Gentlemen:

We are counsel to BullFrog AI Holdings, Inc., a Nevada corporation (the "Company"). We refer to the above-captioned registration statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), filed by the Company with the Securities and Exchange Commission.

We have examined the originals, photocopies, certified copies or other evidence of such records of the Company, certificates of officers of the Company and public officials, and other documents as we have deemed relevant and necessary as a basis for the opinion hereinafter expressed. In such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as certified copies or photocopies and the authenticity of the originals of such latter documents.

Based on our examination mentioned above, we are of the opinion that the securities being registered to be sold pursuant to the Registration Statement are duly authorized and will be, when sold in the manner described in the Registration Statement, legally and validly issued, and fully paid and non-assessable.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. In giving the foregoing consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Act, or the rules and regulations of the Securities and Exchange Commission.

Very truly yours,

*/s/ SICHENZIA ROSS FERENCE LLP*

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the inclusion in this Registration Statement on Form S-8 of our report dated April 25, 2023, of Bullfrog AI Holdings, Inc. relating to the audit of the financial statements for the period ended December 31, 2022 and 2021 and the reference to our firm under the caption "Experts" in the Registration Statement.

/s/ M&K CPAS, PLLC

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www.mkacpas.com

Houston, Texas

July 3, 2023

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**Calculation of Filing Fee Tables**  
**Form S-8**  
(Form Type)  
**Bullfrog AI Holdings, Inc.**  
(Exact Name of Registrant as Specified in its Charter)

Table 1—Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common stock, \$0.00001 par value per share:	457(c) and 457(h)	900,000 <sup>(1)</sup>	\$ 3.65 <sup>(3)</sup>	\$ 3,285,000	\$ 0.00011020	\$ 363
Equity	Common stock, \$0.00001 par value per share:	457(c) and 457(h)	346,607 <sup>(4)</sup>	3.65 <sup>(5)</sup>	\$ 1,265,116	\$ 0.00011020	\$ 140
		Total Offering Amounts			\$ 4,550,116		\$ 503
		Total Fee Offsets					—
		Net Fee Due					\$ 503

(1) Represents shares of common stock, \$0.00001 par value per share (“Common Stock”), of Bullfrog AI Holdings, Inc. (the “Company”) reserved for issuance under the Company’s 2022 Equity Incentive Plan (the “Plan”). Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement also covers an additional indeterminate amount of shares to be offered or sold pursuant to the Plan and shares that may become issuable under the Plan by reason of certain corporate transactions or events, including any share dividend, share split, recapitalization or any other similar adjustment of the outstanding Common Stock.

(3) Estimated solely for the purpose of calculating the registration fee computed pursuant to Rule 457(c) and (h), upon the basis of the average of the high and low prices of the common stock as quoted on the Nasdaq Stock Market on June 28, 2023.

(4) Represents the number of shares issued and issuable pursuant to the exercise of stock option and warrant awards (both vested and vesting in the future) that were made under the old equity incentive plan of the Company.

(5) Estimated solely for the purpose of calculating the registration fee computed pursuant to Rule 457(c) and (h), upon the basis of the average of the high and low prices of the common stock as quoted on the Nasdaq Stock Market on June 28, 2023.