

JOHN FARRELL

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EDUCATION

Brown University

Sc.B. Computer Science and Mathematics GPA: 4.0

Providence, RI

Sep 2022 - May 2026

- **Coursework:** Software Engineering, Data Structures and Algorithms, Computer Systems, Statistics, Linear Algebra, Machine Learning, Data Science, Computer Vision, Cybersecurity and Data Ethics

WORK EXPERIENCE

BillMax

Software Engineering Intern

Dallas, TX

Incoming May 2024

- Developing an offline-first mobile app using Google Flutter and SQLite for 400+ service technicians.

Paidly

Software Development Intern

Rochester, NY

May 2023 - August 2023

- Managed the development lifecycle for a critical account verification system, encompassing design documentation, prototypes, pipeline management, and database schema design. Leveraged Mastercard's Open Banking platform to instantly verify bank accounts.
- Leveraged the Jest framework to craft 200+ unit tests across 60+ suites, achieving 99.7% code coverage.

Sharp Notions

Software Development Engineer Intern

Fairport, NY

June 2022 - August 2022

- Served as the primary engineer for triaging new issues, fixing regressions, and surfacing high-priority bugs. Merged more than 50 PRs, fixing numerous bugs and introducing notable features.
- Demonstrated high-proficiency with full-stack development. Designed engaging user dashboard interfaces with Figma, TypeScript, and NextJS. Successfully deployed a REST API service utilizing Node and PostgreSQL, critical for managing client information among other web services.

EXTRACURRICULARS

Head Teaching Assistant

Brown University

Providence, RI

March 2024 - Present

- Actively managing a staff of 10 TAs, acting as the touchpoint between TAs and professors.
- Instructing over 200 students, tailoring and grading assignments in HTML, CSS, JavaScript, and Python, while providing comprehensive weekly support through office hours.

Collegiate Track and Field Athlete

Brown University

Providence, RI

March 2024 - Present

- Committing 15+ hours per week to competing as an NCAA D1 athlete in the Ivy League conference.

PROJECTS

Machine Learning for Speed Ratings

Python, Pandas, Seaborn, NumPy, scikit-learn

GitHub

Accurately predicted speed ratings, a common metric for recruiting cross country athletes. Created several robust pipelines to train and tune XGBoost, Linear Regression, Random Forest, and KNN models.

Collegy

MongoDB, Express, React, Node, ChakraUI

<https://collegy.org>

Deployed a full-stack application to provide guidance to high schoolers exploring college. Successfully optimized a college recommendation algorithm design to efficiently process 1,200,000+ data points from 2,500+ colleges. Implemented a user management system using Google OAUTH and Redux.

SKILLS

Programming Languages: Java, Python, JavaScript, TypeScript, CSS, C, C#, C++, Go, Ruby, PHP

Frameworks and Tools: Ruby on Rails, Next.js, React.js, Node.js, Chakra, Bootstrap, MongoDB, PostgreSQL, GraphQL, Agile, Amazon Web Services, Chart, MySQL, SQLite, Firebase, Figma, Docker, Insomnia, Git, Heroku, Postman, Pandas, Numpy

AWARDS

Top Feature Matching Algorithm

CSCI 1430, Brown University

Developed the most precise feature detection algorithm in course history. Implementation involved modifying root SIFT feature extraction and window optimization, resulting in a 98.7% precision rate. February 2024