Ken Kirio

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EDUCATION

Brandeis University, Waltham, MA — Expected May 2024
BS/MS in Biochemistry and BS in Computer Science — GPA: 3.99
QBReC Fellow, Undergraduate Biochemistry Department Representative
Selected Courses: Computer Security, Database Management Systems, Deep Learning, Operating Systems,Web App Development, Software Testing Techniques, Data Structures & Algorithms, Linear Algebra

SKILLS

Languages: Java (Maven, JUnit), Python (Pytorch, Flask), R (Tidyverse),
JavaScript (ExpressJS, React, jQuery), HTML/CSS
Tools: Linux, Git, Automated Testing (Gherkin, Cucumber, WebDriver), Databases (MySQL, MongoDB)

EXPERIENCE

Data Scientist, Kadener Lab, Brandeis University — May 2021 – Present

- Bioinformatics data science studying deep transcriptomic datasets
- Create and perform custom pipelines in Linux
- Analysis and visualization in R: principal component analysis, differential analysis, cluster analysis
- Awarded grants totaling $16,000 from Quantitative Biology Research Community, Blavatnik Family Foundation, Gordon Science Fellowship

Computer Science Instructor, Juni Learning — May 2021 – Present

- Taught weekly one-on-one coding lessons to K-12 students in Python, Java, Data Structures & Algorithms using a project-based curriculum
- Maintain records covering multiple courses and skill levels, ranging from 5-12 students per week

Computer Science Teaching Assistant, Data Structures & Algorithms, Brandeis University — Aug – Dec 2022

- Created curriculum and taught weekly recitations to 10-20 students on linked lists, trees, graphs, heaps, priority queues
- Assessed and provided feedback on assignments for 50+ students each week

PROJECTS

Behavior-Driven Design Automated Testing, Brandeis University — Nov – Dec 2023

- Automated tests for a simple application which converts metric/Imperial units
- Utilizes Gherkin to describe scenarios, Cucumber Java to code backend
- Utilizes boundary value, equivalence class, all-pairs testing methods

Automated Web Testing, Brandeis University — Nov – Dec 2023

- Automated tests for the Google Calculator with Selenium WebDriver
- Utilizes boundary value, equivalence class, all-pairs testing methods

Behavior-Driven Design Automated Testing, Brandeis University Nov – Dec 2023

- Automated tests for a simple class which converts metric/Imperial units. Written with Cucumber in Java.
- Utilizes boundary value, equivalence class, all-pairs testing methods

Brandeis Sports Complex Website, Brandeis University Nov – Dec 2022

- Mock website for the Brandeis Sports Complex which allows users to learn about the facilities, programs, and events, and sign up for a membership
- Admin can add new programs and events and reply to messages submitted through the contact form
- Features user authentication and database management
- Written in Javascript (Express.js) with MongoDB backend

Brandeis University Student and Alumni Association Website, Brandeis University Oct – Dec 2022

- Mock website for the BUSAA where its can members connect with each other, share information about job opportunities, post events and communicate through a real-time chat
- Features user authentication, RESTful API, database management
- Written in Javascript (Express.js) with MongoDB backend

Drug Toxicity Deep Learning Model, Brandeis University Nov – Dec 2023

- Graph Attention Network trained to identify 12 toxicity characteristics based on molecular structure
- Achieved ROC AUC of 0.754 on test data, highest in the class

Disease Diagnosis Deep Learning Model, Brandeis University Oct – Nov 2023

- Fine-tuning of the BERT Large Language Model (LLM) to diagnose Acute Respiratory Distress Syndrome (ARDS) based on medical notes