Gil Alon

BROWN UNIVERSITY '22 COMPUTER SCIENCE SC.B.

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Skills

PROGRAMMING

Java, Python, C, JavaScript, React

OTHER

HTML/CSS, LaTeX, SQL, MongoDB

LANGUAGES

Hebrew (bilingual proficiency)

Coursework

GPA: 4.0

Machine Learning, Systems Security, Ordinary Differential Equations, Computer Systems, Statistical Inference, Object-Oriented Programming, Data Structures & Algorithms, Discrete Mathematics, Linear Algebra, Multivariable Calculus

Interests

Machine learning, data analysis, cybersecurity, STEM education and inclusion, sudoku puzzles and thrift shopping.

Work Experience

FULL STACK DEVELOPER INTERN

Strongsuit.Co • May 2020 — Present

- Automated the entire process for onboarding new members using 3 APIs, and webhooks
- Designed and built web pages and features using React such as individualized profile pages and favoriting posts.
- Developed testing infrastructure for large parts of the codebase using React-Testing-Library.

HEAD TEACHING ASSISTANT

Brown CS Department • March 2020 — Present

- Led a staff of 20+ undergraduate TAs to teach Introduction to OOP: Brown's historically largest course with 400 students.
- Developed curriculum, such as new projects and built Python scripts utilized by the class.
- Individually mentored 25 students in lab section and design discussions.
- Cumulatively held over 80 hours of office hours as a teaching assistant.
- Served as an undergraduate teaching assistant for Discrete Mathematics.

UNDERGRADUATE RESEARCHER

Brown University Artificial Intelligence Lab for Bio Medical Information • Feb 2019 — July 2020

- First author of a publication on the quality of machine learning models to predict patient diagnoses from a series of symptoms.
- Trained 44 machine learning classifiers using Python SciKit Learn on multiple datasets.
- Accepted to present a poster at the American Medical Informatics Association conference.
- Learned SQL to sort 61,532 hospital admissions into a cohesive dataset.
- Built a search engine to extract the most relevant PubMed articles from patient symptoms.

COMPUTER SCIENCE INSTRUCTOR

Code for Tomorrow • Jun 2019 — Aug 2019

- Led a classroom of 24 students building and coding LED cubes and robot arms
- Worked one-on-one with students to build their structures and design and debug their code.
- Volunteered to teach low-income students basic coding concepts, using Arduino software to light up LED cubes or move their robot arms.

DEBATE CURRICULUM DEVELOPER

Lumos Debate Institute • Aug 2015 — June 2018

- Taught 100+ students over 3 years public speaking, research and critical thinking skills.
- Developed an intensive curriculum of dozens of educational games and speaking drills utilized in camps across the East Coast.
- Coordinated a workshop of 30 students and 8 instructors, focusing on public speaking skills.

Programming Projects

PATIENT DIAGNOSES

Python/SQL • Aug 2019

- Wrote a published paper assessing machine learning classifiers in predicting patient diagnoses
- Evaluated neural networks, multilayer perceptron, random forest classifiers using SciKit learn python library.
- Cleaned a 61,532 patient dataset.

SEARCH ENGINE

Python • June 2019

- Built a search engine utilizing Whoosh library in Python
- Increased accuracy by implementing query expansion using Lexigram API
- Indexed 50,000 PubMed articles

DROPBOX

Python/SQL • Apr 2020

- Built a secure file upload and sharing server system where users have personal directory.
- Encrypted a database of user information using bcrypt library in Python and SQL.
- Parsed user input and sanitized path variables to block potential attacks.

SHELL

C • Sep 2019

- Built a Linux terminal shell.
- Responds to user signals and fg, bg commamnds.
- Executes all Linux user commands.
- Parses user input.