Justin Barlas

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EDUCATION

Brown University, *Sc.B. Applied Mathematics-Computer Science, Urban Studies*, 4.0 GPA   Providence, RI | May 2023
- Bonner Community Fellow   Providence RI | Spring 2020 – Spring 2023
- Relevant courses**:** Software Engineering, Artificial Intelligence, Computer Vision, Data Science

EMPLOYMENT EXPERIENCE

Verily (Alphabet Inc.), *Software Engineer Intern*   Boston, MA | May. 2022 – Aug. 2022
- Programmed a customer-facing web application using Angular and Typescript for the user interface on top of a Flask and Python backend framework using SQLAlchemy to interact with PostgreSQL database
- Developed test suite using Cypress for UI end-to-end testing and Pytest for backend routes and logic
- Communicated with a UX design team to develop the application's UI and four other engineers to integrate the application into the existing codebase in an agile development environment

Annenberg Institute, *Undergraduate Research Assistant*   Providence, RI | Jan. 2022 – Present
- Create a REPL in Python which interacts with Twitter's API to scrape Twitter data from school district twitter pages to analyze tutoring policy
- Summarize and clean data from a research study done in a Texas school district using Stata, performing tasks such as merging and reshaping data sets, creating summary tables, and running linear regressions

Brown University Computer Science Dept., *Teaching Assistant*   Providence, RI | Aug. 2021 – May 2022
- Hold office hours each week for students to ask conceptual questions or aid in debugging in either Pyret (functional) or Python (object-oriented)
- Lead lab section with over 30 students per week, teaching concepts to supplement their understanding of the course material

EXTRACURRICULAR EXPERIENCE

Full Stack at Brown, *Full Stack Engineer*   Providence, RI | Jan. 2022 – Present
- Collaborate with other undergraduate students on a project team to develop applications for student groups on campus
- Deploy applications using the MERN stack

Swearer Tutoring Enrichment in Math and Science (STEMS), *Site Leader, Tutor*   Providence, RI | Oct. 2019 – May 2022
- Coordinate program details between Brown's Swearer Center, the student volunteers, and the programs community partner, Hope High School, to ensure that the student tutors are equipped to have a practical impact
- Lead member meetings designed to promote tutor growth and enhance their understanding of the community that they serve

Brown Undergraduate Math Project, *Participant*   Online | Aug. 2020
- Investigated repeating decimals from a number theory perspective, aiming to determine patterns in their period
- Authored findings in a research paper under the direction of a faculty advisor

PROJECTS

Concentration Checker, *Typescript, Java*   May. 2022
- Full-stack application developed in a Software Engineering course in a team of 6 students; led as a primary contributor for architecture development and API routing utilizing the Spark web framework

6stack, *Javascript*   Feb. 2022
- Full-stack application utilizing the MERN stack with Redux; the app allows the user to look up and store player statistics for Overwatch, fetching data from ow-api

Game Night, *Python*   Dec. 2021
- Computer Vision final project which given an image of a tic-tac-toe board or a game of connect four, will detect the current game state using contour detection and returns the optimal strategy for the position using an adversarial search algorithm

Tron, *Python*   Dec. 2021
- Artificial Intelligence final project which implements an alpha-beta pruning algorithm using a Voronoi heuristic to determine the next best move for a bot in the game TRON

SKILLS & INTERESTS

Languages: Java, Python, Typescript, JavaScript, SQL, MATLAB, HTML, CSS, Stata, Pyret, Scala
Skills: Angular, React, Flask, Spark, Cypress, Pytest
Interests: Ultimate frisbee, longboarding, esports, traveling, hiking, and chess