

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

Brown University Computer Science Dept., *Teaching Assistant* Providence, RI | Aug. 2021 – Present

- Hold office hours each week for students to ask questions in Pyret (functional) and Python (object-oriented)
- Lead lab section with over 25 students per week, supplementing their understanding of the course material

Annenberg Institute, *Undergraduate Research Assistant* Providence, RI | Jan 2022 – Present

- 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
- Utilize GET requests from Twitter API to gather information from school district Twitter pages in addition to web scraping district websites to analyze tutoring policy

Self-Employed, *Tutor* St. Petersburg, Florida | Nov. 2016 – Present

- Explain key concepts to students in subjects in mathematics ranging from Algebra I to Calculus
- Mentor 2-3 students per week on college admissions, providing insight on the standardized testing process and SAT/ACT content preparation

EXTRACURRICULAR EXPERIENCE

Swearer Tutoring Enrichment in Math and Science (STEMS), *Site Leader, Tutor* Providence, RI | Oct. 2019 – Present

- 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 an effective impact
- Lead member meetings designed to promote tutor growth and enhance their understanding of the community that they serve

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 full-stack applications using the MERN stack

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

COMMUNICATION EXPERIENCE

Brown Political Review, *Interviewer* Remote; Providence, RI | Feb. 2021 – Feb. 2022

- Edit and collaborate with other interviewers to ensure the publications are coherent and clear in their message while maintaining accuracy to the original interview
- Publicize interviews for the Brown Political Review with various figures involved in shaping the political landscape

PROJECTS

6stack, *Javascript* Feb. 2022

- Full-stack application using 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

Personal Website, *Javascript, HTML* Oct. 2021

- Personal website hosted on GitHub created with JQuery Terminal library in Javascript and HTML

SKILLS & INTERESTS

Languages: Java, Python, JavaScript, SQL, MATLAB, HTML, CSS, Stata, Pyret, Scala, Pandas

Interests: Ultimate frisbee, longboarding, esports, traveling, hiking, and chess