Justin Barlas

69 Brown St, Box 7452 | Providence, RI 02912 | Phone: (727) 542-4343 | E-Mail: justin_barlas@brown.edu | jbarlas.github.io

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**:** Artificial Intelligence, Computer Vision, Computational Probability and Statistics

Saint Petersburg High School, *International Baccalaureate Program Salutatorian,* 4.66/4.00 GPA — St. Petersburg, FL | 2019

EMPLOYMENT EXPERIENCE

Brown University Computer Science Dept., *Teaching Assistant* — Providence, RI | Aug 2021 – Present
- Hold office hours for students to ask questions in Pyret (functional) and Python (object oriented)
- Lead lab section with 25 students per week, supplementing their understanding of the course material

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 effective impact
- Lead member meetings designed to promote tutor growth and enhance their understanding of the community that they serve
- Assist teachers in the classroom at Hope High School by providing one-on-one academic support to their students, and engage with students as a peer mentor, developing their self-efficacy in the STEM field and throughout their education

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

RESEARCH EXPERIENCE

Annenberg Institute, *Undergraduate Fellow for Education and Social Policy* — Remote; Providence, RI |Summer 2021
- Summarized and cleaned data in Stata, performing tasks such as merging and reshaping data sets, creating summary tables, and running linear regressions
- Collaborated with two other undergraduate fellows in data cleaning, analysis, and performing a literature review
- Attended faculty-led workshops in topics from data analysis in Stata, introductions to GIS software, and Q&A sessions with post-doctoral research fellows and professors involved in social policy research

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

COMMUNICATION EXPERIENCE

Brown Political Review, *Interviewer* — Remote; Providence, RI | Feb. 2021 – Present
- 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

Feature Matching, *Python*
- Local feature matching algorithm which gathers interest points from two input images through Harris corner detector, detects features using a SIFT-like algorithm, and matches features between images using NNDR
- Outputs images with matched features highlighted with 66% accuracy across images

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

Adversarial Search, *Python*
- Implements adversarial search algorithms minimax and alpha-beta pruning to solve instances of tic-tac-toe and connect 4

SKILLS & INTERESTS

Languages: Java, Python, Stata, Pyret, MATLAB, JavaScript, HTML, Scala, Pandas
Interests: Ultimate frisbee, longboarding, esports, traveling, hiking, and chess