Nicholas Harras

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Education

Rutgers University   New Brunswick, NJ
B.S. in Computer Science   December 2019
- **Related Coursework:** Algorithms *(present)*, Principles of Programming Languages *(present)*, Intro to AI, Computer Architecture, Discrete Structures I/II, Linear Algebra, Calculus I/II, Data Structures

Experience

SEMGeeks   Belmar, NJ
Web Development Intern   September 2017 - present
- Working closely with web developers and designers to help create web sites for small businesses
- Utilizing **WordPress** and **HTML/CSS** in a professional setting
- Researching malicious **PHP** scripts that had stolen client information using steganography

Campus Activities

Undergraduate Student Alliance of Computer Scientists   Piscataway, NJ
Mentor/Member   September 2016 - present
- Mentoring a group of six computer science majors on **Bash** commands, data structures, **Git**, and various other topics
- Assisting computer science first-years with their coursework
- Working with members of the Rutgers computer science community to plan community events, seminars, and hackathons

Creation of Games Society   Piscataway, NJ
Member   September 2016 - present
- Developing an isometric beat-em-up in **Unity**. As the team member most experienced with **Git**, I have taken on much of the project management responsibility.
- Helped build a light-based puzzle game in **Java** using the **LibGDX** library

HackRU   Piscataway, NJ
Volunteer   May 2017
- Assisted hackers throughout the event with technical issues, specifically regarding **Python** and **Java** errors

Projects

Probabilistic Search Program
Python program that finds a particular cell in a grid, despite a ranging likelihood of false-positives for each cell and being limited to orthogonal movement
- Decreased average search time by replacing a priority-queue-based movement system with a matrix informed by a changing belief state and the program's current "search position"
- Increased likelihood of a hit when the program is searching the correct cell by applying the likelihood of a false negative to Bayes' Theorem

Cache Simulator
Program written in **C** that efficiently parses pseudo-memory text files, utilizing bit indexing, locality algorithms, and masking techniques

Skills

- **Programming Languages:** Proficient in Java and Python; Familiar with C, PHP, JavaScript, HTML/CSS, R, and Lisp (Scheme)
- **Technology and Software:** Git, Node.js, WordPress, Bootstrap, Unity, LibGDX, LaTeX, MongoDB