# Nicholas Harras

(201) 317-2212 • nicholas.harras@rutgers.edu • github.com/harras

## 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*

- Experience working with **WordPress** and **HTML/CSS**
- Researching malicious **PHP** scripts that had stolen client information using stenography
- Working closely with professional web designers

## 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 closely with members of the Rutgers computer science community

**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've taken on most project management responsibility.
- Developed 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 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