

# NICHOLAS HARRAS

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

## EDUCATION

---

### Rutgers University

*B.S. in Computer Science*

New Brunswick, NJ

*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

*Web Development Intern*

Belmar, NJ

*September 2017 - present*

- Working closely with web developers and designers to help create websites 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

*Mentor/Member*

Piscataway, NJ

*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

*Member*

Piscataway, NJ

*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

*Volunteer*

Piscataway, NJ

*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,  $\text{\LaTeX}$ , MongoDB