

# NICHOLAS HARRAS

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## EDUCATION

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### Rutgers University

New Brunswick, NJ

*B.S. in Computer Science*

*August 2018*

- **Related Coursework:** Linear Optimization, Computer Security, Databases, Internet Technology, Systems Programming, Algorithms, Principles of Programming Languages, Intro to A.I., Computer Architecture, Discrete Structures I/II, Linear Algebra, Calculus I/II, Data Structures

## EXPERIENCE

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### SEMGeeks

Belmar, NJ

*Web Development Intern*

*September - December 2017*

- Worked closely with web developers and designers to help create websites for small businesses
- Utilized **WordPress** and **HTML/CSS** in a professional setting
- Researched malicious **PHP** scripts that had stolen client information using steganography

## PROJECTS

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### Neutral Network Colorizer

**Python** program that attempts to colorized black and white images with a neural network, trained with a variety of color photos.

- Outlined a more realistic goal for the program to achieve - a focus on beach landscape colorization - and accordingly trained the network on a more specific data set.

### 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

**C** program that efficiently parses pseudo-memory text files, utilizing bit indexing, locality algorithms, and masking techniques

## CAMPUS ACTIVITIES

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### Undergraduate Student Alliance of Computer Scientists

Piscataway, NJ

*Mentor/Member*

*September 2016 - present*

- Taught a group of four CS students the basics of **Bash**, **Git**, as well as data structures and other CS concepts
- Offered guidance to CS students with respect to clubs to join, topics to explore, textbooks to read, etc.
- Assisted computer science first-years with their coursework

### HackRU

Piscataway, NJ

*Volunteer*

*May 2017*

- Assisted hackers throughout the event with technical issues, specifically regarding **Python** and **Java**

## SKILLS

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- **Programming Languages:** Proficient in Python, C, and Java; Familiar with C++, JavaScript, and Lisp (Scheme)
- **Technology and Software:** Git, MySQL, JSP, AWS (RDS and EC2), WordPress, HTML/CSS,  $\text{\LaTeX}$