Nicholas Harras

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Education

Rutgers University New Brunswick, NJ
B.S. in Computer Science *December 2018*

- **Related Coursework:** Systems Programming *(present)*, Internet Technology *(present)*, Info & Data Management *(present)*, Algorithms, Principles of Programming Languages, Intro to AI, Computer Architecture, Discrete Structures I/II, Linear Algebra, Calculus I/II, Data Structures

Experience

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

Neutral Network Colorizer
Program written in **Python** 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
Program written in **C** that efficiently parses pseudo-memory text files, utilizing bit indexing, locality algorithms, and masking techniques

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

HackRU Piscataway, NJ
Volunteer *May 2017*

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

Skills

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