NICHOLAS HARRAS

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EXPERIENCE

National Oceanic and Atmospheric Administration   Princeton, NJ
Computer Operator   *June 2019 - present*

- Utilizing **Slurm** and other command line tools to maintain various HPC systems scientists at the Geophysical Fluid Dynamics Lab rely on for their weather modeling
- Developing **Python** and **tcsh** scripts to automate various maintenance tasks
- Working with a Help Desk ticketing system to assist scientists, often with **SSH** and **X2Go** connections, **Slurm** errors, and compiler issues

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

SKILLS

- **Programming Languages:** Proficient in Python, C, and Java; Familiar with C++, JavaScript, and Lisp (Scheme)
- **Technology and Software:** Vim, Git, bash, tcsh, Nmap, WireShark, VirtualBox, InfluxDB, MySQL, JSP, AWS (RDS and EC2), HTML/CSS LaTeX
- **Clearance:** Public Trust

PROJECTS

HPC Monitoring Dashboard (in progress)

Grafana metrics dashboard for various statistics pertinent to monitoring GFDL/NOAA HPCs, utilizing an **InfluxDB** database and **Python**

- Developing **Python** wrappers of **Slurm** and system functions to constantly update an **InfluxDB** database
- Writing software as part of a small team, prioritizing portability and readability
- Working with other operators to find the most useful data representations for their needs

Splunk Virtual Machine Lab (in progress)

Oracle VM VirtualBox network lab being built to learn the network requirements for setting up a SEIM, as well as the basics of practically using **Splunk**.

- Being made using the guides in Tony Robinson's (@da_667) textbook *Building Virtual Machine Labs*.
- Configuring a **pfSense Gateway** for traffic routing between VMs
- Implementing an Intrusion Prevention System VM to generate events

AWS Databases Project

eBay-inspired database model, built with an **AWS MySQL** server and **JSP** webpages

- Gained experience working with the **AWS** platform, hosted the database on **RDS** and the front-end on **EC2**
- Modeled a relational database out before implementation, learned about database best practices
- Built the front-end using **JSP** to manage POST and GET requests, gained experience structuring **HTTP** requests

EDUCATION

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