Pranav Raghavan

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Graduating in March 2021 with a M.S. in Computer Science and Engineering.

Education

University of California, Santa Cruz September 2019 – March 2021
M.S. in Computer Science and Engineering (GPA: 3.57) *Santa Cruz, CA*

- Graduate Coursework: Analysis of Algorithms, Computer Networks, Computer Communication (protocols), Programming Languages, Operating Systems, Machine Learning.

University of California, Santa Cruz September 2015 – June 2019
B.S. in Technology and Information Management + Minor CS (GPA: 3.21) *Santa Cruz, CA*

- Undergrad Coursework: Applied Discrete Math, Computer Systems and Assembly Language, Data Structures, Algorithms and Abstract Data Types, Computer Architecture, Advanced Programming, Natural Language Processing, Database Systems, Computer Networks, Computer Graphics.

Experience

Juniper Networks June 2020 – September 2020
Software Engineering Intern: Graduate *Sunnyvale, CA*

- Interned with the Platform-Interfaces team and contributed C/C++ code to the Junos Evolution (EVO) operating system running on the MX series routers/switches.
- Built a feature that significantly reduces overhead caused due to channel linkdown by checking for platform dependent and independent faults at the FPC, PIC, port and channel.

Riptide IO June 2019 – September 2019
Software Engineering Intern: Undergraduate *Bangalore, India*

- Designed and developed a network capture tool for MS/TP protocol frames.
- Developed periodic database backup service with a REST API interface and unit tests.

Riptide IO June 2016 – September 2016
Software Engineering Intern: Undergraduate *Santa Barbara, CA*

- Migrated Docker microservices a to an updated Ubuntu base container.
- Increased unit test code coverage for existing time modules by 80% using the PyTest framework.
- Built a feature to detect changes in configurations using hashing along with REST API interface and unit tests.

Projects

Multithreaded Distributed Password Cracker

- Built a multithreaded and distributed solution using C++ STL (standard template library) to brute force unix passwords by splitting the search space across 4 CPUs each with 24 threads (96 threads total).

Multithreaded Language Comparison

- Built similar matrix multipliers in C, C++, Rust and Go and compared the solutions in terms of speed, syntax and programming language implementation.

An Analysis of Contention Resolution Techniques in QSMA

- Implemented new variations of protocols and simulated in C++ using Network Simulator 3 (NS3).

Skills

Proficient with Python, C, C++, Linux/Unix, Bash, Git, PostgreSQL

Experience with JavaScript, Java, Haskell, Go, Rust, GDB (GNU project debugger), NodeJS, ReactJS, Docker, Object Relational Model (ORM), MySQL, SQLite