Vihar Patel

Permanent Residence: Pleasanton, CA
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Education

Purdue University, West Lafayette, IN | Graduating 2019 | GPA: 3.52

- BSc, Computer Science, concentrations in Machine Learning and Information Systems

Work Experience

Teaching Assistant | Purdue Computer Science; Prof. George B. Adams | Dec 2016 to date

Current Teaching Assistant for CS250-Computer Architecture involved designing, conducting and grading labs where students learn about circuits, ARM architecture and Assembly programming using RPi 3.

Research Intern | Raspberry Pi Foundation; Purdue University | Summer 2017, Summer 2018

Worked on implementing and optimizing a 64-bit kernel and headless Operating System for the Cortex A53 chip on the Raspberry Pi 3. We were a team of 3 who evaluated and analyzed porting a 64-bit OS to the Raspberry Pi and then implemented it. I worked on optimizing the OS to be usable on a minimal system like the Raspberry Pi 3. My work included optimization, evaluation and repeated end to end and performance testing of the modified kernel.

Purdue Police Student and Dispatch Trainer | Purdue University | Fall 2015 – date

I am responsible for training Student Patrol and dispatch personnel of the Purdue Police Department in efficiently using new campus emergency systems and Purdue Safewalk Program. These are systems geared towards improving response time and efficiency in resolving non-emergency and emergency incidents on Purdue's West Lafayette campus.

Project Experience

TS Fair Time Scheduler (C): Implemented an operating system process scheduler to achieve a 'fairer' approach to process scheduling thus improving the speed of the Operating System.

Clustering (Python): Implemented a k-means clustering algorithm to classify and learn from the Yelp database.

Database Implementation (Java): Constructed and implemented a database on top of a framework of JSON files. Features implemented included integrity validation, access control and query functionality.

FLIZ (C): Built a Lisp(y) programming language while exploring lower level languages like Lex and Yacc.

Process killer (C++): Built a program that competed against other programs to measure who kills the other's processes faster.

Movie Theater database (SQL/PLSQL/JDBC): Built an entire relational database for movie theaters which included comprehensive tables, relational queries, triggers, procedures and exception handling.

Shell (C++): Built my own Shell by writing grammar rules and implementing many features emulating a bash shell.

Skills & Abilities

Programming skills	**: Java**, C++, **C,** Matlab, SQL, **NoSQL**, Go, ARMv8
Software tools & Scripting Languages	**:** Eclipse, Vim, Visual Studio, JavaScript, Shell scripting, **Python**, Rest API, Git, Pivotal Tracker (AGILE)
Hardware	**:** Logic gates & circuit assembly
Technical skills	**:** C**omplex algorithms analysis and problem solving**, Testing and debugging, Memory and time optimization, Systems programming, **Relational database management**, Deep Learning/ Neural Networks, Knowledge of DevOps
Professional skills	**:** Teamwork, Leadership, Communication, Time management, Customer Service