Ruitian Lin

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Education

University of California, San Diego   *GPA: 3.86/4.0*

B.S. of Computer Science   *Graduation: June. 2019*

Coursework Completed: Operating system, Computer Network, Compiler, Data mining, Client-side web programming, Data Structures, Algorithm, Enterprise finance

Work Experience

Arista Networks   *Santa Clara, CA*

Software Engineering Intern   *Jun. 2018 - Sep. 2018*

- Designed and implemented a new FPGA version look-up method which could reduce the reboot time of the switch by 1 minute
- Implemented the single event upset (SEU) recovery mechanism on FPGA to automate the detection and repairing of the CRC error without affecting the network traffic
- Enhanced the command line interface with the ability to display information about the software corrected CRC errors

ProductBio   *San Diego (remote), CA*

Data Engineering Intern   *Jan. 2018 - Jun. 2018*

- Structured and sanitized over ten thousands entries of raw merchandise data against the company's database schema using PostgreSQL
- Developed and validated a predictive model that explains the correlation between products' pricing and the environmental attributes
- Applied Principle component analysis(PCA) on the model for visualization

Meitu   *Xiamen, China*

Software Engineering Intern   *Jun. 2017 - Sep. 2017*

- Improved the image conversion efficiency through integrating open source libraries into the company's image codecs project in C++
- Achieved 2x speedup over the core image filtering algorithms by refactoring code structures, applying matrix operations and using multi-threading
- Designed and implemented demos of 3D rendered images and animation with WebGL and ThreeJS

UC San Diego   *La Jolla, CA*

Undergraduate Teaching Assistant   *Jan. 2017 - Mar. 2018*

- Hosted office hours and graded assignments

Projects

Feature Tracking Command-line Tool

Tech Stack: Python, MySQL   *Arista 24-Hour-Hackathon*

- Created and populated MySQL tables storing information of various feature releases
- Provided a command-line tool that supports efficient database-level CRUD function on the released features

Cobra Language

Tech Stack: Ocaml, C   *Mar. 2018 - Jun. 2018*

- Designed and built a statically-typed functional programming language from scratch
- Implemented mark-compact algorithm as the automatic garbage collection mechanism
- Applied compiler optimization techniques such as constant propagation and instruction selection to reduce the number of assembly instructions generated

NBA Most-Valuable-Player Predictor

Tech Stack: Python, Scikit-learn   *Oct. 2017 - Nov. 2017*

- Conducted quantitative analysis on all player statistics to identify patterns and training features
- Built a predictive model and successfully predicted the top three MVP candidates in the most recent NBA season

Extracurricular Activity

Triton Engineering Student Council   *La Jolla, CA*

Lead of Professional Development   *Oct. 2016 - Jun. 2018*

- As the team lead, I organized UCSD's largest student-run career fair, Decaf, with over 50 companies and 1300 students in attendance in January 2018
- Designed and Executed a new volunteer management mechanism that successfully managed over 60 volunteers on the day

Skills

Programming   Java, Python, C++, C, Ocaml, Bash, x86, JavaScript, HTML/CSS, Object Oriented Development

Tools/Framework   Git, UNIX/Linux, GDB, CMake, React, MeteorJS, Cordova