Xianjie Zheng

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Education

Carnegie Mellon University, Pittsburgh, PA — Expected Dec 2021

Master of Science in Electrical and Computer Engineering

- Relevant Courses: Computer Systems, Machine Learning (ongoing), Pattern Recognition (ongoing)

University of Wisconsin-Madison, Madison, WI — May 2020

Bachelor of Science: double major in Computer Sciences and Applied Mathematics — Overall GPA: 3.85/4.0

- Dean's List Awards: Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019
- Relevant Courses: Algorithms, Artificial Intelligence, Cryptography, Graphics, Networks, Operating Systems, Optimization, User Interface, Combinatorics, Stochastic Processes

Skills

- Programming Languages: Java, C, Python, MATLAB, Julia, Bash, C++, HTML, JavaScript
- Technologies: Docker, Docker Swarm, GitHub (https://github.com/xzheng97), Reactjs, React Native

Work Experience

Rokid Corporation Ltd. — **San Carlos, CA**

Algorithm Intern — May 2019 - Aug 2019

- Investigated an existing third-party API in AR field and documented its function features to apply in future cases.
- Integrated the API into Android demo application using Java and benchmarked its performance with other solutions.
- Built 10+ ready-to-use Docker images with different configuration environment using Dockerfile and managed them within a docker registry image on the private server.
- Deployed existing VLAD algorithm onto Docker swarm and improve its' efficiency by 10% by implementing its key KMeans algorithm using Pyspark framework.

COSMOS Undergraduate Research — **Madison, WI**

Research Assistant (Guided by Prof. Theodoros and PhD student Ankur Goswami) — Feb 2019 - Apr 2019

- Programmed to pinpoint different sections within pdf files and visualized them with bounding boxes using python.
- Researched on different deep learning models (ConvNets, RNN, etc.) for text classification.

UW – Madison Computer Science Department — **Madison, WI**

Peer Mentor of CS 537(Operating Systems) — Jan 2019 - May 2019

- Held office hours to solve conceptual questions and coding problems with about 50-60 students in person.
- Assisted Professor Shivaram Venkataraman and other peer mentors to prepare and organize course materials.

Morgridge Institute for Research — **Madison, WI**

IT Support Assistant — Jan 2019 - May 2019

- Analyzed and resolved a range of software/hardware/connectivity issues for 100+ researchers.
- Assisted manager with implementation and maintenance of the network infrastructure in the whole building.

Project Experience

Concurrent Caching Proxy Server Design (C) — Summer 2020

- Implemented an HTTP/TCP web proxy server that process real-world client request concurrently.
- Fulfilled thread safety and avoided race conditions by utilizing locks and semaphores.
- Added key-value cache that followed LRU policy to improve performance by storing recent web objects.

Linux make Command (C) — Fall 2018

- Built a program that resembles Linux make system command from scratch; took Makefile as input and executed each command consecutively and handled any encountered exceptions.
- Utilized linked representation of graph structure to store commands in Makefile and traversed it to find the executing sequence, while detecting any possible cycle at the same time using DFS.

Optimal Portfolio Assignment (Julia) — Spring 2019

- Led a team of three and built three models to perform stock portfolio optimization with JuMP.
- Trained models with real S&P 500 data and compared the results of different models.

Handwritten Digit Recognition (Java) — Spring 2018

- Implemented a 2-layer, feed-forward neural network and trained it with back-propagation algorithm.
- Used *ReLU* and *Softmax* activation function to update weights, which were set randomly at start.