Qian Cheng

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EDUCATION

CARNEGIE MELLON UNIVERSITY **Pittsburgh, United States**

- **Master of Science in Electrical & Computer Engineering** **Dec 2020**
- GPA: 3.92/4.0

Courses: Advanced Cloud Computing, Web Application Development, Deep Learning, Machine Learning, Computer System, Computer Vision.

TIANJIN UNIVERSITY **Tianjin, China**

- **Bachelor's Degree in Optoelectronic Information Science and Engineering** **Jul 2019**
- GPA: 3.7/4.0

PROJECTS

Distributed System for Topic Modeling on Large Web-Crawled Corpora | CMU Feb 2020 – Mar 2020

- Designed and optimized Apache Spark program with HDFS to load, preprocess and transform crawled data and processed 180 GB files within 35 minutes with 16 AWS m4.xlarge instances
- Implemented gradient descent algorithm for logistic regression with Spark based on Python and achieved to complete two iteration with 40 GB Criteo dataset within 30 minutes with 16 AWS m4.xlarge instances
- Understood mechanism of HDFS and RDD, and leveraged knowledge about PySpark and functional programing

Resource Scheduling with Kubernetes | CMU Apr 2020 – May 2020

- Designed scheduling policy with Go programing language based on Kube-Batch to schedule MPI jobs and ML jobs on 22 nodes in 4 racks
- Implemented FIFO-Random, FIFO-Heterogeneous, and SJF-Heterogeneous policies; designed own scheduling policy to maximize total resource utility of different job tracks
- Comprehended mechanism of Kubernetes and how to optimize, monitor and debug Kubernetes resources

CMU Flea Market Website | CMU Mar 2020 – Apr 2020

- Developed a flea market website using Django for backend and Bootstrap for user interface
- Implemented core functionalities such as register, log in, post product and advantaged feature such as navigation based on user location using Google API, purchase with PayPal API; deployed website on Google Cloud Platform
- Gained experience about Django frame and web application development

Dynamic Storage Allocator | CMU Nov 2019 – Dec 2019

- Wrote Dynamic Storage Allocator based on C language to implement malloc function with best-fit policy
- Improved performance of allocator with segregated free lists based on double linked lists
- Learned principle of storage allocation in C and how to design, build and improve a storage system

INTERNSHIP

Nano-Photonic Laboratory | CMU Sep 2018 – Sep 2019

School of Electrical and Computer Engineering, Carnegie Mellon University

- Developed Python code to accomplish instrument control with laser and optical spectral analyzers.
- Built Graphical User Interface based on PyQT5 and accomplished multi-thread operation on a variety of instruments.
- Improved simulation code based on Julia and Python focuses on generating Kerr solitons in micro-ring resonators.

SKILLS

Languages: Python, Java, C, JavaScript, HTML, CSS, MATLAB, SQL, Go
Frameworks & Tools: Django, Git, Kubernetes, AWS, Spark, MySQL, Linux, TensorFlow