Kevin **Cao**

(909)-662-6915 | kevin.cao2000@gmail.com | kevinc0229.github.io | kevinc0229 | kevinc0229

Education

UC San Diego *La Jolla, CA*

M.S. in Electrical Engineering (Computer Engineering) | GPA: 3.5 *Exp. Mar 2023*

B.S. in Computer Engineering | GPA: 3.7 *Grad. Dec 2021*

Experience

Workday *Pleasanton, CA*

Software Development Engineering Intern | Data Science Platforms Team *Jun. 2022 - Sept. 2022*

- Enhanced authentication gateway via OAuth2 protocol to centralize access to all applications served by the data science platforms team on a single dashboard, creating a Single-Sign On experience according to users to the life time of the granted access token.
- Designed and implemented a new UI for the application dashboard to create hierarchy and display only accessible applications to the user.
- Deployed UI changes to the hosting cloud EC2 instance through Ansible while also updating env variables to reflect updates.
- Integrated open source AWS CLI code structure to support terminal access to back-end Spark and Presto engines reducing API calls from user.
- Set up CI/CD pipeline with Bitbucket, Jenkins, and JFrog artifactory to automate deployment process of new CLI program.
- **Technologies**: Scala, AWS, Python, Angular, OAuth2, Ansible

ASML *San Diego, CA*

Software Engineering Intern | Technical Development Team *Jun. 2021 - Sept. 2021*

- Supported proposed framework to introduce an additional vessel laser as well as reduce all laser wavelengths by 90% to increase EUV generation efficiency on lithography systems.
- Developed a diagnostic tool GUI to collect low level machine parameters for testing and production.
- Designed the dynamic mock-ups for front-end layout to group related parameters for technical intuition.
- **Technologies**: C++, XML, Python

UC San Diego - Jacobs School Engineering *La Jolla, CA*

ECE Lab Tutor *Jan. 2020 - Apr. 2020*

- Assisted professor Sujit Dey's class of 140 students in boolean algebra and digital circuit design.
- Led weekly lab hours to explain concepts relating to circuit design and implementation on Xilinx Vivado.

Projects

Fault-Tolerant Cloud Storage Surfstore *Application*

Developer *Mar 2022*

- Created a cloud storage system that allows multiple clients to sync files to a server cluster through hashed data blocks.
- Designed file versioning such that client synchronization operations will prioritize changes according to their commit order.
- Incorporated Raft consensus algorithm to allow for server failures, leader elections, and recoveries while maintaining data accuracy.
- **Technologies**: Golang, Raft

Web Analytic Visualizer *Website*

Full-stack Developer *May 2021*

- hosted a web page on an Apache server to periodically fetch user data, store to Mongo database, and display to visual dashboards.
- Implemented user authentication and management in dashboard controls to let admin control user accesses.
- **Technologies**: Apache2, MongoDB, Node.js

Automated Image Captioner *Python Notebook*

Developer *Nov 2020*

- Trained a deep learning recurrent neural network to caption images from Microsoft COCO dataset.
- Implemented teacher forcing on ResNet50 network to obtain softmax distribution of caption words.
- Built and tuned a multi-class cross entropy evaluator obtain BLEU score over 64 on test sets contains 3,000 images.
- **Technologies**: PyTorch, JupyterHub, NumPy, nltk, CUDA

Skills

Programming C++, Python, JavaScript, Golang, C, Java

Tools Jira, Git, React, Bash Scriptingm, Agile

Languages English, Chinese