

SHUMIN KONG

me@shumink.com

EDUCATION

The University of Sydney, Australia

Master of Philosophy, Computer Science, October 2020 (Expected)

Working on Machine Learning and Reinforcement Learning.

The University of Sydney, Australia

Bachelor of Information Technology (1st Class Hons.), Computer Science, July 2019

Selected Coursework with High Distinction: System Programming, Data Structure, Algorithms and Complexities, Deep Learning.

SKILLS

Programming Languages: (Proficient) Java, Python; (Familiar) C, SQL, JavaScript.

Frameworks and Tools: TensorFlow, PyTorch, Keras.

Web Development: Node.js, React.js, Flask, SQL, MongoDB, GraphQL, Serverless.

Cloud: Amazon Web Service, Google Cloud Platform.

EXPERIENCE

Full Stack Developer

InsideOut Institute, Sydney, Australia, Apr. 2020 - Current

- Implemented the landing pages and an online learning platform from concept through deployment.
- Collaborated with product managers to implement new feature developments.
- Implemented the web app with React.JS and GraphQL and deployed the backend on AWS Lambda.

Teaching Assistant

The University of Sydney, Sydney, Australia, Feb. – Jun. 2020

- Responsible of reinforcing students' understanding to the lecture materials and assignment design.
- Subject taught: COMP5329 Deep Learning.

System Operation Analyst Intern

Nasdaq, Inc., Sydney, Australia, Nov. 2018 - Mar. 2019

- Joined the SMARTS Broker Service team and responsible of maintaining the service level agreement.
- Designed and implemented internal service deployment automation tools using Vue.js and Flask.
- Optimized the deployment workflow and reduced 92.3% of manual processing time of relevant tickets.

Summer Trainee Engineering Program Intern

Google, Inc., Sydney, Australia, Nov. 2016 - Feb. 2017

- Implemented the backend API for analysis and management of tamper-evident sealing of portable devices.
- The system enables the users to identify malicious damaging or replacement on glitter nail polished seals.
- The service is served as a RESTful API on Google Cloud Platform.

PROJECTS

Matrix Computation Engine

The University of Sydney, Semester 1, 2016

- Speeds up matrix multiplication practically by 16 times faster than naive method.
- Achieved by various data and task parallelism techniques including POSIX Threads and Intel SSE 2.
- Execution benchmark ranked the 4th place in a 450+ students' class.

Historical Print Digitization

The University of Sydney, Summer 2017

- Designed and implemented a data pipeline to extract historical record from degraded newspaper.
- The pipeline performs auto-alignment, cropping and optical character recognition using OpenCV.
- Acceptance rate ranges between 80% and 98% across different years of record.

PUBLICATIONS

- [1] **S. Kong** and M. Takatsuka, "Hexpo: A vanishing-proof activation function," in *2017 International Joint Conference on Neural Networks (IJCNN)*, May 2017, pp. 2562–2567, doi: [10.1109/IJCNN.2017.7966168](https://doi.org/10.1109/IJCNN.2017.7966168).
- [2] **S. Kong**, T. Guo, S. You, and C. Xu, "Learning student networks with few data", In *34th AAAI Conference on Artificial Intelligence (AAAI)* 2020, pp. 4469-4476.
- [3] **S. Kong**, F. Shi, C. Wang, and C. Xu, "Point Cloud Generation From Multiple Angles of Voxel Grids," *IEEE Access*, vol. 7, pp. 160436–160448, 2019, doi: [10.1109/ACCESS.2019.2951420](https://doi.org/10.1109/ACCESS.2019.2951420).
- [4] **S. Kong**, S. You, S. Ma, C. Qian, C. Xu, Multi-agent Reinforced Image Restoration for Multiple Corruption Types, Submitted.
- [5] S. He, **S. Kong**, S. You, J. Han, F. Wang, C. Qian, C. Xu, C. Xu, Protecting Face Privacy in Wild Images via Adversarial Rewards, Submitted.