Jiaxin Li

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EDUCATION

University of California, San Diego **2018-2020**
Master of Science La Jolla, CA

- GPA: 3.72
- Courses: Neural Networks and Pattern Recognition, Probabilistic Reason and Learning, Algorithm Design and Analysis, Statistical Natural Language Processing, Computer Vision, Recommender Systems and Web Mining

University of California, San Diego **2014-2018**
Bachelor of Science La Jolla, CA

- GPA: Cumulative: 3.89; Cognitive Science major: 4.00
- Courses: Advanced Data Structures, Intro to A.I. Stats Approach, Distributed Cognition, Language Development, Cognitive Neuroscience, Systems Neuroscience, Neuroanatomy and Physiology

EXPERIENCE

San Diego Supercomputer Center **June 2017 - Present**
Student Assistant La Jolla, CA

- Machine learning research and application. Helped develop machine learning models for unsupervised classification of geographic regions in large satellite maps, developed efficient and end-to-end pipelines for model selection and hyperparameter tuning. Currently working on applying recurrent models to achieve sample-efficient image segmentation for cardiovascular disease research.
- Production-grade data processing systems. Built and maintained end-to-end data processing pipelines for analyzing large-scale satellite imagery. Wrote training and testing systems for various data-intensive projects using SLURM, Kubernetes, Python, and shell script. Built and maintained dedicated distributed computing clusters for projects which needed controlled environments.

San Diego Supercomputer Center **March 2017 - June 2017**
Undergraduate Intern La Jolla, CA

- Data workflow and database design. I designed custom training and testing loops for the WIFIRE project, and wrote a custom database model to suit the project's specific needs.

PROJECTS

Frequency-Domain Music Generation Using Recurrent Networks
University of California, San Diego, Winter 2019

- Designed a LSTM-based model to learn and reproduce raw music waveforms in frequency space, leveraging similar mechanics found in the human cochlea.

PUBLICATIONS

- Mai H. Nguyen, Daniel Crawl, Jiaxin Li, Dylan Uys, Ilkay Altintas. "Automated Scalable Detection of Location-Specific Santa Ana Conditions from Weather Data using Unsupervised Learning." *2017 IEEE International Conference on Big Data*.
- Susanne Benz, Hogeun Park, Jiaxin Li, Daniel Crawl, Jessica Block, Mai Nguyen, and Ilkay Altintas. "Understanding a Rapidly Expanding Refugee Camp Using Convolutional Neural Networks and Satellite Imagery." *2019 IEEE International Conference on eScience.*
- Mai Nguyen, Jiaxin Li, Daniel Crawl, Jessica Block, and Ilkay Altintas. "Scaling Deep Learning-Based Analysis of High-Resolution Satellite Imagery with Distributed Processing." *2019 IEEE International Conference on Big Data (workshop)*.

HONORS

- Magna Cum Laude, UCSD Class of 2018
- Muir Provost Honors, UCSD, Fall 2014 - Spring 2018
- Phi Beta Kappa Society, 2018 - Present

SKILLS

- Programming. Python, Java/Scala, JS, C/C++, Mathematica, Shell script.
- Researching. Neural network research, statistical analysis, multi-disciplinary studies involving artificial intelligence, cognition, and neuroscience.
- Data systems. Building and maintaining hardware and software systems for large-scale data processing.

INTERESTS

- Recurrent neural networks in machine learning.
- Human cognition, computer vision and natural language processing.
- Embodied cognition and related computational processes.
- General tinkering with computers, PC assembly, soldering jobs, DIY projects, Arduino and Raspberry Pi, everything about spaceflight.
- Writing fiction and poetry. Drawing.
- Lightsaber battling with my self-made, one-of-a-kind lightsaber.