# Rukan Shao

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## Education

**University of California, Los Angeles** — *Los Angeles, CA*

MS in Computer Science — *2013-2016*

**The Pennsylvania State University** — *State College, PA*

BS with honors in Engineering Science and Mechanics — *2007-2011*

Minor in Mathematics

## Experience

**ASRC Federal** — *Moorestown, NJ*

Data Scientist — *2016 to Present*

- **Experience:** Over 7 years of hands-on experience in data science, specializing in machine learning, particularly focused on time series data and accelerating synthetic data generation.
- **Innovation and Flexibility:** Played a pivotal role in our department's founding as a research-focused unit into a contract-winning team by constantly learning and implementing new technologies best tailored to customer needs.
- **Collaboration:** Collaborated with cross-functional teams, including engineers and business analysts, to build innovative solutions that target customer needs.
- **External Engagement** Frequently communicate with external stakeholders and partners to insure clear communication of data requirements, ensuring seamless data integration and alignment with organizational objectives.
- **Security and Compliance:** Experience over multiple defense industry contracts working with secured classified information.
- **Environment Proficiency:** Proficiency with both Azure and AWS environments, as well air-gapped classified environments.
- **Technical Presentations:** Delivered technical presentations and workshops on machine learning and time series analysis, enhancing team knowledge and building internal capabilities.
- **Data Synthesis Expertise:** Specialized in synthesizing limited datasets, leveraging advanced techniques to generate artificial data for model training, ensuring robust performance even with small data sizes.
- **Algorithm Optimization:** Optimized machine learning algorithms for resource-constrained environments, achieving significant improvements in model efficiency and reducing computational costs.
- **Core Technologies:** Python, PyTorch, RayTune, Azure, AWS, Ubuntu, SQL, Git, OpenCV.

**UCLA** — *Los Angeles, CA*

Biocybernetics Lab — *2014-2016*

- Applied Machine Learning to thyroid hormone dynamics.
- Extended a model of thyroid hormones to better fit data in thyrotoxic conditions.
- Implemented a complicated multi-compartmental model in Matlab.
- Analyzed model simulations with various numerical methods and statistics.

**UCLA** — *Los Angeles, CA*

Teaching Assistant — *2014-2016*

- Teaching Assistant for the Computational and Systems Biology class at UCLA.
- Taught a number of modelling tools such as Matlab, Vissim, Dimsum, SAAM II, and COMBOS.

**Penn State** — *State College, PA*

Senior Capstone Thesis at Penn State — *2010-2011*

- Created a model of a brain using Matlab.
- Modeled electrical activity and mechanical behavior of the brain using Matlab.
- Presented research at the International Council for Industrial and Applied.
- Mathematics (ICIAM) at Vancouver, Canada during Summer 2011.

**Cornell** — *Ithaca, NY*

Center for Nanoscale Systems REU at Cornell — *Summer 2010*

- Experienced work in a research environment by collecting data, maintaining a lab notebook, and finding creative solutions to hurdles in experiments.
- Demonstrated through experiments, that my supervisor's design for an actuator would be feasible when scaled down to a nano-scale device.
- Built a proof of concept for an actuator using a circuit board.