



MACHINE LEARNING SOFTWARE ENGINEER

# STEPHEN JARRELL

## GET IN CONTACT

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## PERSONAL PROFILE

I am a Machine Learning Software Engineer Intern with applicable experience in deep learning, supervised learning, and unsupervised learning. I have a passion for employing this technology for bioinformatics, human computer interaction, fighting climate change, and improving health care. I graduate with a BS from UCSD in June 2021.

## AREAS OF EXPERTISE

- Fluent in Python
- PyTorch and TensorFlow
- Mathematics of Machine Learning: Vector Calculus, Linear Algebra, Probability, Statistics
- Machine Learning Techniques
- Linux, UNIX
- Git / GitHub Version Control
- AI and Scientific Computing

## OTHER SKILLS

- Data Structures and Algorithms
- Data Pipelining and Preprocessing
- Data Mining with Unsupervised ML
- Java and C++
- SQL and MySQL
- Web Scraping with HTML/CSS
- Projects at my website
- Public Speaking & Presenting
- Simplifying the complex concepts

## WORK EXPERIENCE

### MACHINE LEARNING SOFTWARE ENGINEER INTERN

San Diego Supercomputer Center | November 2020 – Present

- Deep Learning: Using PyTorch and detectron2 to train, tune and test segmentation & detection models of Mask R-CNN and Faster R-CNN on a supercomputer cluster. We will strategically deploy our models at high altitude weather stations to swiftly detect wildfires from a long range **before human observers can**.
- Data Management: Operating on a remotely connected pod in a Kubernetes Environment, using Linux commands to transfer databases to our cloud storage
- Evaluation: Building image preprocessing for model training and custom pipelines for model performance with metrics of DICE Score, precision, recall, F1, and AP.

### UNDERGRADUATE RESEARCHER

Computational Neural Data and Dynamics Lab | Dec 2019 – Feb 2020

- Aided principal researchers in creating the first taxonomy of every cell in the mammalian brain by creating efficient data processing pipelines for genomic and epigenomic data sets from wet labs, and feeding this high dimensionality data into unsupervised machine learning models with Python and Linux.

### OMNICHANNEL DATA ANALYST INTERN

Axos Bank | June 2019 – Sept 2019

- Created Python scripts that identified and fixed errors in the programming of our telecommunications system, improving average time on call by 32% and abandonment rate by 26%.
- Analyzed a decade of the Home Mortgage Branch's performance data and isolated variables that would improve lead conversion rate in the future.
- Created custom SQL queries as the backbone for big data pipelines which fed data into analysis and quality assessment scripts

## EDUCATION

### UNIVERSITY OF CALIFORNIA – SAN DIEGO 2017-2021

B.S. in Cognitive Science – Machine Learning and Neural Computation

- Provost Honors Student
- Upper Division GPA 3.76 | Overall GPA: 3.49
- Pursuing a Master's Degree in Computer Science