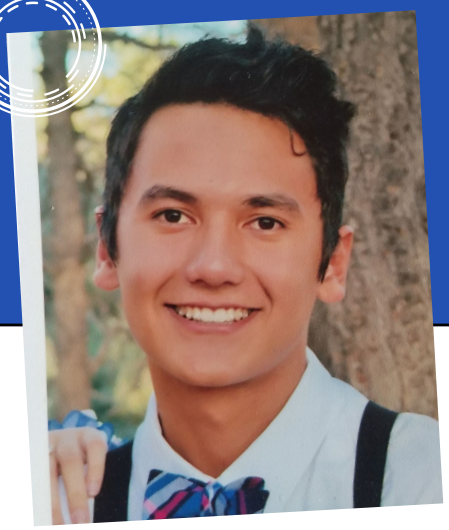

MACHINE LEARNING SOFTWARE ENGINEER

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 and computer vision, supervised, and unsupervised learning. I have a passion for applying this technology for computer vision, bioinformatics, fighting climate change, and improving health care. I graduate with a BS from UCSD in June 2021.

AREAS OF EXPERTISE

- Fluent in Python
- PyTorch, TensorFlow and OpenCV
- Prototyping CNNs from Scratch
- Deep Learning fundamentals
- Linux and UNIX Environments
- Git / GitHub Version Control
- Mathematics of Machine Learning: Vector Calculus, Linear Algebra, Probability, Statistics

PROJECTS

- Gesture Recognition from Scratch using Convolutional Neural Networks in TensorFlow and OpenCV
- Transfer Learning: YOLOv3
- Deep Dream: Gradient Ascent with TensorFlow to make AI Art
- Classic Car Restoration using C and Microcontrollers
- My Website, which can be found at stephenjarrell19.github.io

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 upon ignition. Current F1-Score = 0.833.
- Data Management: Operating on a remotely connected pod in a Kubernetes Environment, using Linux for data management and Git for version control
- 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

- Utilizing Python, Jupyter Notebooks, and Linux: I 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 algos.

OMNICHANNEL DATA ANALYST INTERN

Axos Bank | June 2019 – Sept 2019

- Created Python scripts that leveraged numpy to identify and fix 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 into statsmodels and matplotlib visualizations in Jupyter Notebooks

EDUCATION

UNIVERSITY OF CALIFORNIA – SAN DIEGO 2017-2021

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

- Provost Honors
- Upper Division GPA 3.76 | Overall GPA: 3.49