

Scott Figueroa Weston

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EDUCATION

University of California – Santa Barbara, Santa Barbara, CA

Sep. 2022 – Present 📅

Major: B.S. Computer Engineering

GPA: 3.97 (Dean's List Engineering)

WORK EXPERIENCE

Advanced Life Technologies LLC – Santa Barbara, CA

Sep. 2023 – Present 📅

Machine Learning Intern

- Developed machine learning models for prosthetic arms with PyTorch, enabling personalized customization options and enhancing user comfort.
- Used Kivy framework to implement GUI to instruct users through surgery simulation and allow administrators to interface with surgical robot.
- Programmed embedded systems using Python/C++ to allow efficient movement of various prosthetics.
- Integrated Pulse Physiology Engine into surgical robot to achieve human-like responses to stimuli.
- Incorporated conversational capabilities by integrating FastChat large language model into surgical robot.
- Used OpenCV to display camera video from surgical robot to GUI and save video logs as mp4 files.

Smart Circuits and Systems Lab – Santa Barbara, CA

Jun. 2023 – Present 📅

Deep Learning Researcher

- Used PyTorch to design a novel self-supervised image classification algorithm (DisCLR) which increased accuracy in downstream tasks by 10%.
- Created python scripts to train model on CIFAR-10 dataset and measure accuracy using a linear classifier trained for 100 epochs.
- Used Cuda library to save and load deep learning models onto GPU server for experimentation.
- Successfully reduced model training time by pretraining encoder to learn better representations of images.
- Researched SimCLR, MoCo and SimSiam frameworks to gain familiarity with contrastive learning methods.

SKILLS

- **Programming Languages:** Python, C/C++, Java, JavaScript, HTML, CSS, MATLAB.
- **Programming Libraries:** OpenCV, CUDA, Scikit-learn, Numpy, Pandas, Librosa.
- **Deep Learning Frameworks:** PyTorch, TensorFlow, Keras.
- **Web Frameworks:** React, Django, React Native, Kivy.
- **Platforms:** Google Cloud/Google Compute Engine, Cloudflare, OpenSea.

EXTRACURRICULARS

Data Science Club – Santa Barbara, CA

Sep. 2022 – Present 📅

- Competed in Data Science Club competition with project “SentimentSub” which used speech emotion recognition to generate color-captioned subtitles from an mp4 file.

Math Research Apprenticeship – Santa Barbara, CA

Jan. 2023 – May 2023 📅

- Worked with PhD student in developing a novel framework for 3D reconstruction of 2D images.
- Used algebraic geometry techniques to verify feature extraction of SIFT algorithm to increase robustness.