

Timothy Do

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EDUCATION

University of California, Los Angeles Sep. 2023 – Jun. 2024

M.S. Electrical and Computer Engineering, Signal Processing Specialization

Los Angeles, CA

- **Cumulative GPA:** 3.933/4.0
- **Relevant Coursework:** Computational Imaging, Digital Speech Processing, Advanced Deep Learning & Neural Networks, Modern Wireless Communication Systems, Large-Scale Social Complex Networks
- **Clubs and Societies:** ECEGAPS (Electrical and Computer Engineering Graduate and PostDoc Society)

University of California, Irvine Sep. 2019 – Jun. 2023

B.S. Electrical Engineering, Digital Signal Processing & Communications Specialization

Irvine, CA

- **Cumulative GPA:** 3.924/4.0, **Major GPA:** 3.944/4.0, **Magna Cum Laude, Accelerated Status**
- **Relevant Coursework:** Computer Architecture, Control Systems, Digital Image/Signal Processing, Electronics
- **Clubs and Societies:** Irvine Computer Vision Laboratory, IEEE, IPC, Eta Kappa Nu, Tau Beta Pi

EXPERIENCE

Embedded Software Engineering Co-Op Jun. 2023 – Apr. 2024

Maxeon Solar Technologies

San Jose, CA

- Implemented Robust OpenCV pipelines to quantitatively detect module features for defect binning
- Developed Tkinter GUI interfaces for operator ease of use when testing images under custom data pipelines
- Trained robust YOLOv5/YOLOv8 Module Defect Classification Models deployed in manufacturing fab

Lead Undergraduate Student Researcher Jan. 2022 – Jun. 2023

Irvine Computer Vision Laboratory at UC Irvine

Irvine, CA

- Researched Spectral Image Filtering and Baseball Simulations under Professor Glenn Healey
- Digitized Hyperspectral Optical Imaging Filters into CSVs and compared them against certain chemical emissions
- Managed 15+ Graduate/Undergraduate Researchers in Google Spaces and developed shared MATLAB/Python Scripts hosted on Google Drive/Github for analyzing SWIR/NVIR vegetation spectras

Industrial Internet of Things Intern Jun. 2022 – Sep. 2022

Western Digital

San Jose, CA

- Applied Industrial Toolsets to develop a Realtime Raspberry Pi Sensor Data Analytics Platform
- Earned Six Sigma Yellow Belt award for learning foundations of Lean Six Sigma through LinkedIn Learning
- Saved the company an annual projected cost of \$312,000 from hazard mitigations in the manufacturing fab

PROJECTS

End-to-End Automatic Modulation Recognition | *Python, MATLAB, PyTorch* Jan. 2024 – Mar. 2024

- Designed a CNN-based AMR System on I/Q samples (93.2% test accuracy at high SNR)
- Preprocessed multiple modulation datasets by one-hot encoding integer labels for minimizing cross-entropy loss
- Applied data augmentation by index reversal on each of the data samples for a 3% performance improvement

RuHuman Audio Verification System | *Python, MATLAB, Javascript, Librosa, Flask* Sep. 2023 – Dec. 2023

- Developed a resilient audio verification system to classify between real and fake speech via RawNet2
- Investigated the effects of AWGN on the ASVspoof2021 set based on t-DCF & EER metrics
- Implemented a Flask Server to verify audio samples from any web device with a microphone

The Do-Pro Senior Design Project | *Raspberry Pi, Python, MATLAB, OpenCV* Sep. 2022 - Mar. 2023

- Led a team of four in creating an embedded stereo-vision camera for ADAS detection and 3D-Reconstruction
- Calibrated the stereo-camera in MATLAB and implemented block matching algorithms with OpenCV
- Designed the button/touch-screen user interface using RPi.GPIO and Tkinter for navigating the camera
- Developed a Power Regression Model for the Do-Pro to perceive depth with 6% error from 1-3 feet

SKILLS

Electronics: Raspberry Pi, Network Analysis, Cadence, LTSpice, Soldering, Oscilloscope & Multimeter Measurements

Programming Languages: Python, Java, C, CUDA, MATLAB, bash, MySQL HTML/CSS/Javascript, VHDL

Developer Tools: git, SSH, Makefile, Linux, Azure, VS Code, Visual Studio, PyCharm, Eclipse, Vivado HLS

Libraries: OpenCV, Pandas, Numpy, Matplotlib, PIL, Tensorflow, Pytorch, Tkinter, Socket, Flask, Librosa