

# Jun Hwee Oh

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## EDUCATION

**University of California, San Diego – B.S. Data Science.**

## WORK EXPERIENCE

### Google

June 2022 - October 2022

SWE Intern | Python, Tensorflow, Keras, C++, TFLite

- Implementing on-device multi-modal semantic filtering model as part of the Natural Conversations Team for Assistant.
- Collaborating with Google Research to experiment with various encoders for multimodal architecture and fine tune an audio dialog classifier to generate soft labels for unlabeled dataset (semi-supervised learning).
- Modeling a note velocity prediction to improve music transcription for Google Brain - Magenta. Training CNNs conditioned on pitch and instrument (FiLM layers) and using quantized velocity labels (K-Means, binning). Evaluating various training methods such as regression vs classification as well as predicting relative velocity shift (self-supervised learning).

### Hume AI

January 2022 - June 2022

MLE Intern | Python, Pytorch

- Implemented NLP batch and streaming pipeline consisting of ASR using VAD, Wav2Vec2 + T5 Transformers, and emotion classification with a fine-tuned language model.
- Implemented facial identification across video frames for Hume's facial expression model.
- Trained and deployed additional vision models including FACS classification and face description.
- Implemented face detection package consisting of SOTA models that is used in training/inference of face expression model.

### Google

September 2021 - December 2021

SWE Intern | Python, Tensorflow, C++, SQL

- Productionized TF-IDF weighted GloVe embeddings to calculate how relevant a Google Maps review is to the place - boosting personalization ML models.
- Explored millions of Google Maps data points to analyze correlation across different verticals and determine the best model.
- Created user surveys alongside other data scientists to gather thousands of data points for model evaluation.

### Spatial

June 2021 - September 2021

SWE Intern | C#, Unity, React.js, Typescript, Tensorflow, Python

- Shipped major Spatial 5.0/6.0 features such as Participant List, New Subdock, Moderation System for blocking/reporting.
- Utilized pre-trained holistic model + logistic regression to classify emotion and body pose for WebGL avatars via webcam.

### Gravity Industries

November 2018 – June 2020

SWE Lead | C++, Unreal, WebRTC, GStreamer, Python, Javascript, HTML

- Awarded Epic Games MegaGrant to successfully prototype an augmented reality helmet that displays real-time jetsuit telemetry and allows distributed live streaming to web/mobile via RTC and Janus.

### Virtualitics

July 2019 - August 2019

Data Science Tutor | Python, Jupyter, Scikit-learn, Seaborn

- Lead high school students through a machine learning project start to finish from data exploratory analysis to implementing classical ML models including logistic regression, decision trees, and random forests.

### NASA

June 2019 - August 2019

SWE Intern | C#, Unity, Javascript

- Created new 3D hand controls/gestures for NASA's holographic CAD software.
- Developed AR slide functionalities - save, update, and delete CAD models' current state - allowing NASA scientists and engineers to replicate a PowerPoint experience for holographic models (Europa, Mars Rover) in 3D space.

## RELEVANT COURSES

**MATH 18 – Linear Algebra**

**DSC 102 - Systems for Scalable Analytics**

**DSC 140 - Probabilistic Modeling and ML**

**DSC 190 - Representation Learning**

**CSE 151B – Deep Learning**

**CSE 152A – Computer Vision**