Jun Hwee Oh

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EDUCATION

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

WORK EXPERIENCE

Google June 2022 - November 2022

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

Assistant - Natural Conversations

- Implemented on-device multi-modal semantic filter that detects if a user's query is intended for Assistant or not.
- Productionized on-device preprocessing code for text tokenization and audio to spectrogram conversion.
- Collaborating with Google Research to experiment with semantic and non-semantic audio encoders for multimodal architecture and fine tune an audio dialog classifier to generate soft labels for unlabeled dataset (semi-supervised learning).

Brain - Magenta

- Modeling note velocity prediction that estimates the force with which a note is played as part of MT3 transcription.
- Evaluated models including regression on peak RMS as well as CNNs conditioned on pitch & instrument using FiLM layers.
- Experimented with regression, fine + coarse classification on quantized velocity, siamese network to predict velocity shift between two notes for translation invariance.

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

Maps - Personalization Platform & Core ML

- 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.

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 140 - Probabilistic Modeling and ML
DSC 190 - Representation Learning
CSE 151B – Deep Learning
CSE 152A – Computer Vision