

# Chun-Yi Tu

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## Experience

### Software Engineering Intern

Verizon Media

Sunnyvale, CA

Jun. 2020 - Sep. 2020

- Automated the publishing of models for Tensorflow Serving using CI/CD pipeline with **Chef**
- Reduced the model deployment time for Yahoo news feed by over 90% using dynamic model loading
- Designed a RESTful web service to validate models and monitor server status with Java Jetty

### Software Engineering Intern

Dragon Cloud Artificial Intelligence

Taipei, Taiwan

Jul. 2018 - Aug. 2018

- Developed a **speaker recognition** pipeline and API for verifying speakers in the text-independent scenario
- Created an interactive dashboard to visualize model performance and usage for troubleshooting

## Skills

**Programming:** Python, Java, C/C++, JavaScript, Haskell, SQL, MATLAB, HTML/CSS

**Technologies/Frameworks:** Docker, Git, AWS, TensorFlow, React, Node.js, Express, REST, MVC, Linux Kernel

**Database:** MySQL, PostgreSQL, MongoDB

## Education

### University of California, San Diego

M.S. in Computer Science and Engineering

GPA: 4.0/4.0

La Jolla, CA

Sep. 2019 - Dec. 2020

### National Taiwan University

B.S. in Computer Science and Information Engineering

GPA: 4.14/4.30; Rank: 10/123

Taipei, Taiwan

Sep. 2015 - Feb. 2019

## Projects

### Neural Artist | [neuralartist.com](http://neuralartist.com)

2019

- Implemented **Node.js** and **Express**-based web application for image stylization and social networking
- Used fast style transfer in Python and **Tensorflow** to transform uploaded user pictures into artistic images, and **reduced transformation time by 50%** while serving multiple models
- Designed MVC architecture and RESTful API using Express with **MongoDB**, and deployed the server with Nginx on AWS EC2, ELB and Route 53
- Developed responsive frontend for users to share images and write posts using **React**, **Ajax**, **jQuery**, and Bootstrap, built realtime chat room with Socket.IO and used Passport.js as authentication middleware

### Persona Chatbot | [personachatbot.com](http://personachatbot.com)

2019

- Developed a chit-chat Chatbot that shows a consistent personality in the conversation using a **Transformer**
- Applied **Transfer Learning** to adapt the model pre-trained on a large text corpus to small dialogue dataset
- Created a web application using **Django** for users to interact with the chatbot and define its personality.

### Goodreads Rating and Read Prediction on Kaggle

2019

- Ranked **8th out of 423** people with 1.099 MSE on rating prediction, and 73.32% accuracy on read prediction
- Used **Latent Factor Models** and Alternating Least Square for faster rating prediction
- Exploited implicit feedback by maximizing the probability of relative preference prediction

### Video Compression via Convolutional Neural Network

2018

- Built a streaming video codec which integrates Convolutional Neural Network Autoencoder and **Huffman Coding** with **H.264** to achieve a higher compression ratio than using the conventional H.264 codec
- Improved high-definition video processing in CNN by using gradient-checkpointing to fit large models in GPU