Taoyuan Wang

+1-669-609-3436 | alanwanga@icloud.com | linkedin.com/in/taoyuanwang | San Francisco Bay Area

EXPERIENCE

Software Engineer in Alphabet's Wing
10/24/2022 – Present

Uncrewed Traffic Management Team
Palo Alto, CA

- Designed and developed distributed real-time applications for autonomous drone delivery service (backend with C++ and frontend with Angular on Google infrastructures)
- Implemented configuration systems and operator interfaces based on Google Maps telling drones when and where they are allowed to fly in a timely, reliable manner
- Worked on backend handlers and validators (e.g. polygon self-intersection, vertices duplication, loop clockwise, retrying logic for RPC calls to avoid race conditions, etc)
- Migrated critical data and refactored legacy codes to serve the next generation of aviation

Software Engineer in Appen US
10/01/2021 – 10/21/2022

Computer Vision Tools Team
Sunnyvale, CA

- Led the design and development of smart annotation tools for multi-senor data (frontend with React and Three.js, backend with Flask and Spring)
- Extended pointcloud cuboid annotation to semantics segmentation as side project then got accepted as a new product (got 20+ top customers in autonomous vehicle and robot industries)

Software Engineer in Appen China
04/01/2019 – 09/30/2021

Computer Vision Tools Team
Shanghai, China

- Built for China platforms to support local market (assist in setting up new branch office in China as first engineer)
- Researched on pointcloud object detection/tracking and used opensource projects to increase annotation efficiency
- Conducted sensor fusion experiments based on client device parameters (e.g. LiDAR/camera position, rotation, focal length, etc) with NumPy to project points from 3D to 2D domain
- Implemented event loggers and worked with data scientists to analyze behavior of annotators for training process and tools improvement (reduce annotation cost by 56%)

Software Engineer in Works Applications
04/02/2018 – 03/29/2019

AI WORKS HUE Tech Lead Group
Shanghai, China

- Developed product frontend with Vue.js
- Developed product backend with Spring, Hibernate and JUnit

Research Assistant in Academia Sinica
12/13/2017 – 03/09/2018

Natural Language Processing Lab
Taipei, Taiwan

- Researched on Chinese Short Text Conversation chatbot
- Implemented sequence to sequence models with PyTorch
- Maintained a large repository of post-comment pairs from Weibo datasets
- Used appropriateness scores of comments as reward for reinforcement learning

Mandatory Military Service
11/10/2016 – 10/27/2017

Information Technology Specialists
Tainan, Taiwan

EDUCATION

National Tsing Hua University
Hsinchu, Taiwan

M.S. in Computer Science (Researched in Internet Lab)
Sep 2015 – Aug 2016

National Tsing Hua University
Hsinchu, Taiwan

B.S. in Computer Science (Exchanged to Beijing Tsinghua and Nagoya University)
Sep 2010 – Aug 2015

SKILLS

Languages: Python, JavaScript, Java, C/C++
Frameworks: Flask, React/Redux, Spring, JUnit, Jest, pytest
Developer Tools: Git, Docker, Jenkins, Jupyter Notebook, PyCharm, WebStorm, Intellij IDEA
Libraries: NumPy and WebGL using Three.js for 3D data visualization