

# Taoyuan Wang

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## EXPERIENCE

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### Software Engineer in Appen

Apr 2019 – Present

*Computer Vision Tools Team*

*Sunnyvale, CA (Shanghai til Jan 2020)*

- Localized tools and platforms to assist in setting up new branch office in China as first engineer
- Led to design and develop new annotation tools for 3D model and pointcloud (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)
- 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 logger 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

Apr 2018 – Mar 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

Dec 2017 – Mar 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

## EDUCATION

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### Carnegie Mellon University

Remote

*M.S. in Software Engineering*

*May 2020 – dropout*

### National Tsing Hua University

Hsinchu, Taiwan

*B.S. and M.S. (Internet Lab) in Computer Science*

*Sep 2010 – Aug 2016*

### Nagoya University

Nagoya, Japan

*Academic Exchange to Database Lab (Full Japanese immersion)*

*Oct 2014 – Jul 2015*

### Tsinghua University

Beijing, China

*Development of Mobile User Sensing System with Android and Servlet/JSP*

*Aug 2012 – Sep 2012*

## PROJECTS

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### Watchdog | Python

Oct 2014 – Aug 2016

- Developed a Raspberry Pi remote-control webcam to monitor my pet when I'm far from home
- Designed web UI for controlling servo motors to change the view of webcam
- Auto-checked server status and restarted system if no response from device to minimize maintenance

### Midnight Radio | PHP

Sep 2015 – Aug 2016

- Developed a platform to share music, lyrics, and pictures with friends
- Simulated radio-like live streaming only with synchronization logic

### Boki | Android

Oct 2014 – Jul 2015

- Developed an accounting app with budget control, spend analysis, currency conversion for my studying in Japan

## SKILLS

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**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