WENLAN WEI

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EDUCATION

Cornell Tech New York, NY
Degree Expected: Master of Engineering in Electrical and Computer Engineering Aug 2021-May 2022
Noel Croucher Graduate Fellowship
Relevant Coursework: Applied Machine Learning, Interactive Device Design, Applied DSP and Communications

Wuhan University Wuhan, China
Bachelor of Science in Electrical Engineering | GPA: 3.8 2017-2021
Selected Awards: Luojia Outstanding Scholarship, Excellent National Project Issued by the Ministry of Education

SKILLS

Languages: Python, C#, HTML, Golang, CSS
Frameworks & Tools: Docker, Flask, React.js, Git, Linux, Shell, Latex, Pytorch, TesnsorFlow, Hadoop, Kubernetes

INTERNSHIP EXPERIENCE

VMware Beijing, China
Software Engineer Intern Nov 2020 – Jul 2021
Code Flow – An Arbitrary Python Code Comprehension Helper

- Utilized python compiler, graph network, importance ranking algorithm and GraphViz to **generate distilled visualization of** each connection along with its corresponding pattern from code, which summarized from all the files in any project.
- Applied **the Code Bert model** for generating summary of source code. Optimized the system by introducing the compiling structure in preprocessing process and achieve an accuracy improvement **from 55% to 60%.**
- Constructed a platform for hosting the entire system efficiently with **Flask, React and Kubernetes.**

Softxtream: An AI-powered knowledge management platform

- Softxtream loads fractions of pdf files into the system and makes connections between them frictionlessly for easier management of the study notes. Being deployed to **5 highly ranked universities in China**.
- Boosted by Table recognition and Latex Formula Recognition algorithm from PaddlePaddle.
- Devised the feature that extracts slides and time stamp from zoom video autonomously with a single zoom link. Incorporated face and voice recognition algorithms to generate **compact reports for any speeches.**

Baidu AI Lab, Big Visualization Beijing, China
Research and Develop Engineer Intern Aug 2020 – Nov 2020

- Automatic marketing fee calculation service powered by objecting detecting and scene classification. Increased the accuracy from 62% to 82% by changing training strategy and model modification.
- Devised a storge calculation service by using objection recognition, improved the accuracy from **30% to 85%** in practical scenario by adding robust hidden object inference feature.
- Refactored **Taobao's Search by Image** algorithm by introducing lightweight attention model in preprocessing stage. retrained model with a size of 3 Terabyte image files which includes **10,000 categories** on over 500 servers using **Hadoop**.

RESEARCH PROJECTS

Visual Question Answering Task on Medical Database - University of California San Diego Mar 2020 – Jul 2020

- Collected more than 20,000 images along with their captions to build an opensource medical dataset.
- Implemented 3 VQA models: Lxmert, Stacked attention network, Bilinear attention networks on the X-ray and Pathology dataset.

Garbage Classification System - Imperial College London, UK | Jun 2019 – Sep 2019
Leader of the team

- Applied a 3D camera and robotic arm for automatic garbage detecting and sorting.built the visual part of system on image segmentation and coordination calibration with the 3D camera.
- won the **Best Overall Prize** among 30 groups.

Lightweight Super-resolution Reconstruction Network on Mobile – Wuhan University Wuhan, China | Mar.2019-Oct.2019

- Designed a lightweight super-resolution reconstruction network by introducing h-swish activation function and jump connection. Saved **80%** of the computing resource by Reducing **90% parameters**, with only a cost of **8%** drop in reconstruction performance.
- **Funded by National** Innovation and Entrepreneurship Training Program **and achieved the outstanding prize for the final product in the end.**

PUBLICATIONS

- Lightweight Image Super-Resolution with Mobile Share-Source Network, J. Du and **Wenlan Wei**, IEEE Access, vol. 8, pp. 60008-60018, 2020.
- Towards Visual Question Answering on Pathology Images, X. He & Z. Cai, **Wenlan Wei**, ACL-IJCNLP, 2021 10.18653/v1/2021.acl-short.90