

Yu Zhang

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **Aug. 2021 - Present**

Master of Engineering, Electronic & Computer Engineering

Relevant Courses: *Embedded Operating System, Network Systems and Games, Visual Data Analytics for Web*

Wuhan University, School of Engineering Information, Wuhan, China **Sept. 2015 - Jun. 2019**

Bachelor of Science, Electronic Engineering, Member of Elite Engineer Program

GPA: 3.78, In-major GPA: 3.87, Rank: 10/354

Selected Awards: Dean's List (2016 - 2019), First-class Awards (2018, **6%**), Yu Gang Song Xiao Scholarship (2018, **0.1%**)

SKILLS

Programming Languages: Python, JavaScript, TypeScript, HTML/CSS, Swift, Java, C/C++, SQL, Shell

Front-end: Node.js, Vite, React.js, Vue.js, Redux, ECharts, Three.js, D3.js, Tailwind CSS, Material UI, Ant Design

Back-end: Docker, Django, Flask, Nginx, MySQL, MongoDB, Postgres, Neo4j, Redis, Kafka, Linux OS (Cent, Ubuntu)

ENGINEERING EXPERIENCE

VMware, Inc., Beijing, China, *Member of Technical Staff Intern* **Nov. 2019 - Jul. 2021**

Full-stack Project: An AI-powered online literature research platform

- Developed a **microservice-based** web application and deployed it in **5** top universities of China, which led to improvement in research efficiency and quality of over **1000** researchers
- Improved developer experience and increased team productivity by adopting the **DevOps** model, constructing a highly automated CI/CD pipeline with **Jenkins** and **Docker Compose**, and leveraging **Grafana** for real-time observing
- Built a maintainable and scalable backend system with **Django** and deployed NLP models as REST API with **Flask**
- Significantly improved backend performance by caching and building message queues with **Redis** and **Apache Kafka**
- Designed and implemented user-friendly and easily testable user interfaces with **React.js**, **Material UI**, and **Redux**, and ensured frontend performance with **Nginx**

VMware, Inc., Beijing, China, *Member of Technical Staff Intern* **Jul. 2018 - Mar. 2019**

NLP Project: A sentiment analysis system

- Reduced the manual workload of the post-sales department by building and deploying an email sentiment analysis system using the LSTM model and achieved an accuracy of **95%**
- Proposed and implemented a data preprocessing pipeline by building an email filter using **regular expressions**
- Published the project result in VMware Radio Conference'19 (**5% acceptance rate**) and won the Best Idea Award in VMware Borathon (hackathon, **2nd out of 36 teams**)

NLP Project: A bug deduplication system

- Reduced database query time from **3 hours to 8 minutes** by optimizing query statements (**MongoDB**)
- Accelerated the pre-processing process by caching intermediate results with **Redis**
- Improved model accuracy **from 86% to 92%** by generalizing model architecture and integrating more models

PROJECTS

Automated Olfactory Bulb Segmentation on MRI Image, *University of Science and Technology of China* **Fall 2019**

- Proposed super-resolution reconstruction method to turn low-resolution images into usable high-resolution images for solving the data shortage problem, resulting in expanding the original dataset by **40%**
- Deployed the segmentation model as REST API on the cloud with **Docker** and **Flask**, which provided technical support for over 10 clinicians in 3 hospitals
- Improved user experience by designing and implementing user-friendly interfaces with **PyQt5**

Face Detection Application (iOS), Wuhan University **Fall 2018**

- Enabled real-time image fetching, data processing, and result displaying by developing an iOS app
- Achieved **98%** accuracy on face detection by integrating the cascaded CNN model into the application with **Core ML**