YUCHEN ZHENG

zhengyuchen1017@ucla.edu | Website: alexzheng.io | Linkedin: alexzheng1017 | GitHub: AlexZheng-UCLA

EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)   *Expected Mar 2024*
MS in Electrical & Computer Engineering, GPA: 3.90/4.0
Courses: Matrix Analysis, Data Mining, Natural Language Processing, Large Scale Network

ZHEJIANG UNIVERSITY   *Sep 2018 - Jun 2022*
BE in Automation & Robotics, Minor in Management and Entrepreneurship, GPA: 3.88/4.0
Courses: Programming, Data Structure, Control Theory, Embedded Systems, Robotics, Machine Learning
Awards: Chu Kochen Honors Program, First Class Scholarship, Outstanding Graduates

EXPERIENCE

Machine Learning Intern, *VITALLY AI*   *Jan 2023 - May 2023*
- Fine-tuned stable-diffusion model utilizing DreamBooth and LoRA frameworks with PyTorch, effectively training both style and human models for commercial use on **Amazon Web Services (AWS)** instances
- Engineered and optimized the individual model training and inference pipelines of a pet avatar generation application with **PyTorch** and **Celery**, has catered to hundreds of satisfied customers
- Executed dataset augmentation via OpenCV and leveraged pre-trained models such as CLIP, SAM, DINO to do automated object detection and matting, contributing incrementally to the improvement of training results

Software Engineer Intern, *RESEARCH INSTITUTE OF ZHEJIANG UNIVERSITY*   *Jul 2021 - Jul 2022*
- Updated car simulation system with **C++** in **ubuntu** to incorporate vehicle model represented by neural network
- Programmed automatic control involving localization, path planning and control generation with **Robot Operating System** to successfully run autonomous scaled vehicles
- Reduced control errors by 16% by implementing neural network for learning vehicle dynamics with **PyTorch**

Research Assistant, *STANFORD UNIVERSITY*   *Jul 2020 - Oct 2020*
- Presented summaries of literature in image super-resolution and analyzed its impact in medical diagnostics
- Developed tailored super-resolution neural network for medical image enhancement tasks with **PyTorch**
- Improved classification accuracy by 4% by connecting super-resolution module with classification neural network

PROJECTS (IN GITHUB)

Fantasy Studio, Full-stack App   *May 2023 - Now*
Intelligent image batch matting based on OpenCV and large pretrained models. **React Flask AWS**

LLM Evaluation Model, Course Project   *Mar 2023 - May 2023*
Finetuned reward model on human-annotation dataset for assessing performance of LLMs. **Colab HuggingFace**

Magic Trainer, Open-source Software Extension   *April 2023 - Now*
Stable diffusion webui extension for integrated LoRA training and avoiding redundant environments. **Gradio PyTorch**.

Chat with AI, Full-stack App   *Jan 2023 - Mar 2023*
Platform enabling multiple people to chat with AI based on chat engine and GPT API. **React Redux Javascript NodeJS**

Autonomous Delivery Robot, National Technology Projects for University Students   *Apr 2020 - Apr 2021*
Complete mobile robot based on real-time camera image segmentation and robust path planning. **C++ ROS**

SKILLS

Programming Languages	Python, C++, JavaScript, TypeScript, HTML, CSS, Java, R, Linux command
Frameworks and Libraries	PyTorch, TensorFlow, Node.js, Flask, Celery, React, Redux, Pandas, OpenCV, Gradio
Tools and Software	VSCode, PyCharm, Github, MATLAB, AWS, RunPod, Colab