ZIYAO ZENG

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SUMMARY

Sophomore of ShanghaiTech University majoring in Computer Science

Starting AI-Scientist with Enterprise

Research Interests include Computer Vision, Bioinformatics, Machine Learning

EDUCATION

ShanghaiTech University   **Sept. 2019 - (Expected) June 2023**

B.Eng. in Computer Science, Major

- **Selected Courses:** (∗: graduate-level) Deep Learning∗ (A), Digital Image Processing∗ (A), Probability & Statistics (A), Python Programming (A), Computer Architecture (A), C & C++ Programming (Top Student)

Innovation and Entrepreneurship, Minor

- **Selected Courses:** Negotiation (A), Strategy Management (A), Intro. to Entrepreneurship (Opportunity: A, Marketing: A, Finance: A), Intro. to Economics (A)
- **Entrepreneurial Mindshift Program**   **Babson College | March 2021**

Fuzhou NO.1 High School   **Sept. 2016 - June 2019**

RESEARCH EXPERIENCES

GRASP Lab   **University of Pennsylvania**

Research Assistant | Supervisor: Prof. Jianbo Shi   April 2021 - Present

- **Monocular 3D Object Detection** | Regress 3D bounding box for object using only monocular RGB image | Collaborator: Xinbeng Gao (USTC), Renrui Zhang (MMLab, CUHK)

PLUS Lab   **ShanghaiTech University**

Research Assistant | Supervisor: Prof. Xuming He   July 2020 - Present

- **Mix-data Anomaly Segmentation** | Develop a cascaded auto-encoder with metric learning to perform mix-data anomaly segmentation | Collaborator: Bing Jiang (SenseTime)
- **Noisy Labels Classification** | Design a model using Trinet and early stopping trying to seek common while shelving difference to deal with noisy data classification | Collaborator: Zhitong Gao
- **Uncertainty Estimation** | Focus on uncertainty estimation especially distinguish between epistemic and aleatoric uncertainty using a single model | Collaborator: Zhitong Gao

Virtual Reality and Visual Computing Center   **ShanghaiTech University**

Research Assistant | Supervisor: Prof. Jingyi Yu   Jan. 2021 - March 2021

- **6D Pose Estimation using NeRF** | Modifying NeRF with light disentanglement and rotation matrix optimization to estimate object's 6D pose | Collaborator: Ge Zhang & Peihao Wang
- **Adversarial Training in NeRF** | Adapt NeRF to training under highly noisy scenario by applying method of learning with noisy label | Collaborator: Ge Zhang (U-M) & Peihao Wang (UT Austin)

State Key Laboratory of Drug Research   Shanghai Institute of Materia Medica, CAS

Research Assistant | Supervisor: Prof. Minyue Zheng & Prof. Hualiang Jiang   Jan. 2021 – May 2021

- **miRNA Target Matching** | Design a deep learning model to match miRNA drug with its target | Collaborator: Xiaolong Wu

Laboratory of Bioinformatics and Functional Genomics   ShanghaiTech University

Research Assistant | Supervisor: Prof. Liye Zhang   Jan. 2021 – March 2021

- **Enhancer Prediction** | Design a deep learning model to predict enhancer using genetic information | Collaborator: Chenyue Guo

Laboratory of Cancer Biology   ShanghaiTech University

Research Assistant | Supervisor: Prof. Xuesong Liu   Nov. 2020 - Jan. 2021

- **HRD Prediction** | Develop a deep learning model to predict HRD symptom based on information of genetic copy number signature | Collaborators: Huiming Li

Foot Research Laboratory   Fujian Normal University

Research Assistant | Supervisor: Prof. Yifang Fan   July 2017 - Sept. 2017

- **Adolescent Obesity's Effect to arches of foot** | Conduct a research capturing pressure of feet to study effects of adolescent obesity to arches of foot

WORKING EXPERIENCES

UISEE   Shanghai, China

Intern Algorithm Engineer   July 2021 – Present

- Develop algorithm for monocular 3D object detection for self-driving cars

Shanghai Advanced Research Institute, CAS   Shanghai, China

Intern Lecturer   Aug. 2020 - June 2021

- Teaching advanced scientific topic to public, including deep learning and computer vision

TUTORING EXPERIENCE

Freshman Mentor | Instructed by Prof. Rui Fan   2020 Fall – 2021 Spring

Voluntary

ShanghaiTech Campus Opening Day	2021
Greenpeace	2020 - Present
WWF-China	2020 - Present
ShanghaiTech New Students' Welcoming Activity	2020
International Symposium of Attitude Research, Innovation, and Management (ISARIM 2019)	2019

SKILLS

Python, C/C++, PyTorch, OpenCV, Matplotlib, Numpy, Sklearn, Anaconda, Tmux, OpenMP

Bilingual (Chinese/English: IELTS-6.5, CET6-607, GRE-327+4)