Yuzhong CHEN

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EDUCATION

The Chinese University of Hong Kong 2018.09 – 2022.06
Bachelor of Engineering in Computer Science and Engineering Shenzhen, China
Core Courses: Calculus, Probability and Statistics, Linear Algebra (Julia), Discrete Mathematics, Optimization (MATLAB), Operating Systems, Computer Architecture, Database System, Fundamentals of Machine Learning

University of California, Berkeley Summer 2019
Summer Session | **Courses:** Data Structures, Game Theory Berkeley, US

NYU Tandon 2022.09 – 2024.05
Master's in Computer Engineering New York, US
Core Courses: Machine Learning, Internet Architecture and protocol, Computer Vision, Probability and Stochastic Process, Deep Learning, Image and Video Processing, High Performance Machine Learning

NYU Tandon 2024.09 - present
Doctorate in Computer Science. New York, US

RESEARCH EXPERIENCES

Network Coding Lab, CUHKSZ | *Research Assistant,* Advisor: Prof. Shenghao YANG 2020.06 - 2022.06

- Participated in refactoring the link controller of our BATS protocol; validated the improved BATS protocol using Python
- Applied Python bash command line to collect campus network speed data and check the protocol efficiency for commercial use in kyland
- Implemented cross-camera tracking algorithm on lamppost cameras using BATS protocol based on YOLOX and DeepSORT. Applied real time tracking algorithm with limited calculation power

AI4CE Lab, NYU | *Research Assistant,* Advisor: Prof. Chen Feng 2022.12 - Present

- **EgoPAT3Dv2(website):**
- Developed an innovative algorithm to predict 3D motion targets by utilizing 2D video input. Significantly minimized equipment demands in comparison to the original approach while enhanced overall performance.
- Collected data for the creation of the enhanced dataset.
- Designed a user-friendly website to provide better access/visualization for the users.

TEACHING EXPERIENCES

Internet Architecture and Protocol | *Course Assistant,* Adminstrator: Prof. John Zhao 2023.02 - Present

- Developed educational materials such as problem sets and quizzes while collaborating with professors to enhance their curriculum
- Administered an online learning platform, overseeing its operations and organizing regular office hours to bolster student participation and interaction.

PROFESSIONAL EXPERIENCES

Pinnet Technologies (website)
Computer Vision Algorithm Engineer, Hangzhou 2021.07 – 2021.10

- Helped develop the visual control module of an EHS (environment, health, and safety) system for energy companies, which identifies any potential hazard in the work environment, and notifies control room of non-compliant behaviors
- Trained deep learning models described below to analyze real-time video feeds
- Compared performances of various object detection methods including faster R-CNN, SSD (single-shot detector), and YOLO (YOLOv3, YOLOv4, and YOLOv5 on) on Atlas 200 DK, and implemented non-maximum suppression (NMS) to improve algorithm efficiency

OKR System Development Intern, Chengdu 2019.12 - 2020.01

- Participated in the web development of the company's OKR (objectives and key results) management platform, and realized page function of file management using HTML and JavaScript
- Fulfilled sentence classification tasks within the system using the K-means algorithm in Python

PUBLICATION

- Fang I, Chen Y, Wang Y, et al. EgoPAT3Dv2: Predicting 3D Action Target from 2D Egocentric Vision for Human-Robot Interaction[J]. arXiv preprint arXiv:2403.05046, 2024.

SKILLS & PROFICIENCIES

LANGUAGES: English (*Proficient*, TOEFL 104, GRE V159+Q170+AW3.5), Chinese (*Native-speaker*)
SOFTWARE: Java, C++, Python, HTML, CSS, JavaScript, Julia; MATLAB