Zhongbo Yan

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EDUCATION

Information Networking Institute, Carnegie Mellon University, Pittsburgh, Pennsylvania — Jan 2024 - Jan 2026
- MS in Mobile and IoT Engineering (Advanced Study) — (expected)
- Tuition Scholarship

Faculty of Applied Science, Macao Polytechnic University, Macao, China — Aug 2019 - Jun 2023
- BS in Computing Program (Enterprise Information System) — (GPA: 3.68/4.0)
- Scholarship for Exceptional New Students from Mainland China

Academic Honors and Scholarship
- Ranked 6th out of 67 in Tesla Super Cup Machine Learning Group by Tesla Inc. — Jan 2020
- Second Award of National Olympics of Information by China Computer Federation — Nov 2018

RESEARCH AND PUBLICATION

MPU-UCLA Joint Research Center in Ubiquitous Computing — Oct 2022 - Jun 2023
Macao Polytechnic University, Macao, China

Research Assistant, Adversarial Data Augmentation on Knee Magnetic Resonance Imaging, supervised by Prof. Xu Yang
- Investigated the impact of adversarial data augmentation on improving the classification performance of CNN for knee MRI datasets. Our findings demonstrate a noticeable improvement in AUC and specificity, surpassing that of the first-ranking model provided by Stanford University Machine Learning Group.
- Zhongbo Yan, Xu Yang, Chak Fong Chong, Yapeng Wang "Enhancing Classification Performance in Knee Magnetic Resonance Imaging Using Adversarial Data Augmentation", published in 2023 IEEE 14th International Conference on Software Engineering and Service Science. DOI: https://doi.org/10.1109/ICSESS58500.2023.10293076

International School of Information Science & Engineering — Jan 2023 - Feb 2023
Dalian University of Technology - Ritsumeikan University, Dalian, China

Project Collaborator, Transformer-Based Shape Recognition of Contour Points, supervised by Prof. Fan Xin
- Contributed to implementing masked contours classification network using PyTorch on the PoinTr model source code. Gained a deeper understanding of DGCNN in diverse point cloud extraction and completion and ViT in geometric feature attention.

Summer School Program on 'Smart Objects Applications' — Jun 2021 - Jul 2021
Bologna University, Bologna, Italy

Project Developer, Canarin II Dashboard for Air Pollution Data Visualization, supervised by Prof. Silvia Mirri
- Developed a web app for users to monitor air condition data in Bologna University using the Canarin II sensor.
- Utilized data visualization to enhance the analysis of air pollution data for multiple devices located on different floors.

INTERNSHIP

Industcs, Suzhou, China — Aug 2023 - Oct 2023
Full-stack Software Developing Engineering Internship, IN3+ Group
- Developed an Index Data Distribution Platform using SpringBoot, MyBatis, and Vue.js. Participated in the whole design, implementation, testing, and deployment process, including web-scrapying, requirements analysis, ER diagram design, programming implementation, quality assurance, and server deployment. Maintained both back-end APIs and front-end components in the development and production environment. Gained experience in full-stack development.

BluPurple, Macao, China — Sep 2022 - Dec 2022
Software Developing Engineering Internship
- Developed an iOS App that assists drivers in finding available parking lots for scooters and cars in Macao by utilizing API data provided by the DSTA. The App is designed using SwiftUI to be natively supported by all iOS devices with a user-friendly one-click Siri voice announcement, providing real-time information based on the drivers' GPS location.
- Developed an online chatroom using Next.js, React.js, and Google Firebase, distributed by Vercel. The chatroom incorporates real-time messaging, secure user authentication, and high scalability in serving a large number of users.

TEACHING EXPERIENCE

Undergraduate Teaching Assistant, Macao Polytechnic University, Macao, China — Aug 2021 - Feb 2023
Interest Group Lecturer, Java, C++ and Algorithms, Python Toolkits and Machine Learning, supervised by Prof. Xu Yang
- Published websites in GitBook to assist in lectures, gave lectures on the topics, held 2 hours of lab sessions every week. Graded students' assignments and made suggestions on their academic learning.
- Delivered presentations on topics including web scraping techniques used to extract data from the Baidu Index, as well as the decoding of web pack JavaScript codes to reveal the encryption algorithms for the scrapped data.

SKILLS

Programming	C/C++, C#, Java, Python, JavaScript, TypeScript, Swift, Rust, shell scripting
Tools & Frameworks	Linux, Vim, Git, Docker, Redis, RDBMS, Node.js, NestJS, Vue.js, React, Electron, Django, SpringBoot, MyBatis, Swagger, Jenkins, MATLAB, Mathematica, HTML, LaTeX, Typst.app, SPSS Statistics, Unity3D, Intellij IDEA
Machine Learning	PyTorch, Keras, Pandas, Numpy, CNN, RNN, CycleGAN, LSTM, Adversarial Machine Learning