JUNYI WU

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EDUCATION

MEng Electronic and Information Engineering, Imperial College London   *2021 - 2025*
- Dean's List of Academic Excellence Nominee in 2023 (top 10% of cohort), First Class Honours
- Related Courses: Instruction Architecture & Compiler, Operation System, Software System, Algorithms & Complexity, High Level Programming, Machine Learning, Deep Learning, Computer Vision

IT SKILLS

- Proficient: Python, C/C++, C#, F#
- Intermediate: JavaScript, HTML, System Verilog, SQL
- Technologies: Git, Linux/Bash, Cloud (AWS), Django, Node.js, React.js, HPC, Docker, Unity
- Packages: Pandas, NumPy, PyTorch, Tensorboard, OpenCV

WORK EXPERIENCE

Backend Developer, Omnigames, Shanghai   *Jul - Sep 2024*
- Collaborated closely with Amazon AWS team, trained AI agents in gameplay using Reinforcement Learning
- Built a C# server for session management, optimizing performance using the producer-consumer model
- Modified game client, server and Protobuf schemas, enable flexible gameplay acceleration without glitching
- Developed and Deployed a web app with Django and React.js that automated the generation of game event data and scripts, improved 70% edit efficiency

Engineering Project Consultant, Microsoft   *May - Jul 2024*
- Designed and built a GitHub application, which translates documents and Images of large GitHub repository
- Built a Django backend from scratch, maintained connection between GitHub, Azure, frontend and database
- Implemented repository updating and tracking logic via GitHub API, fully automated the translation process.
- Communicated weekly with Microsoft supervisor, presented final product to Microsoft Cloud team
- Achieved 20% improvement in translation accuracy, enhanced large repository localization efficiency

ML Research Intern, DeepWok Lab, London | **Link to Publication**   *Jul - Sep 2023*
- Collaborated on the development of Mase (Machine Learning Accelerator System Exploration Tool)
- Integrated RepVGG models support into Mase, organized and documented procedures for future developers
- Participated in the exploration of a novel DNN hardware accelerator architecture, developed scripts to ship metadata to the hardware team for hardware-software co-simulation
- Joint First Author of paper accepted at the DATE Conference

RELEVANT PROJECTS

Interactive Schematic Simulator and Integrated Editor   *Feb - Mar 2024*
- Improved ISSIE, an open-source circuit designer/simulator designed in .net framework
- Developed a SheetBeautify module in F# for automatic circuit wiring simplification
- Optimized wire routing using heuristic-based algorithms, improved complexity from exponential to linear

Self-balancing Auto-mapping Rover, Imperial College London   *May - Jun 2023*
- Won **first prize** in a group of 6, built an autonomous balancing rover that navigate and find path inside maze
- Led the software stack development, developed an application from scratch consisting of React.js front-end, Node.js back-end, and AWS EC2 cloud server loaded with MariaDB

Traffic Sign Recognition Research, Imperial College London | **Link to Publication**   *Jul - Sep 2022*
- Investigated numerous cutting-edge algorithms on Computer Vision and Machine Learning in a group of 6
- Reproduced SOTA's accuracy in Traffic Sign Recognition, published a paper on potential improvements