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
- Instruction Architecture & compiler, Software System, Algorithms & Complexity, Digital Electronics, 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*
- Worked closely with Amazon, trained AI agents in gameplay using Reinforcement Learning
- Developed a server for training sessions management, significantly enhanced salability and efficiency
- Modified both game client and server, enable flexible gameplay acceleration without glitching
- Integrated Tencent GME service, automated token generation using the TEA encryption algorithm.

ML Research Intern, DeepWok Lab, London | **Link to Publication**   *Jul - Sep 2023*
- Participated in the development of Mase (Machine Learning Accelerator System Exploration Tool)
- Implemented support for various models and training algorithms, optimized their performances on HPC
- Explored mixed-precision pruning and corresponding hardware acceleration methods, developed search scripts to ship metadata to the hardware team for hardware-software co-simulation
- **Joint First Author** of paper accepted at the Data Conference 2023

RELEVANT PROJECTS

Microsoft Engineering Project Consultant   *May - Jul 2024*
- Designed and built a GitHub application, automated the translation of documents and Images utilizing LLMs
- Developed a Django backend from scratch, automated the translation process and Interaction with GitHub
- Implemented a documentation architecture, replace links in translated markdown to show updated images
- Achieved significant improvement in translation accuracy, enhanced large Repo localization efficiency

Interactive Schematic Simulator and Integrated Editor   *Feb - Mar 2024*
- Improved ISSIE, an open-source circuit designer/simulator designed in .net framework
- Created algorithms and heuristics for simplifying wire placement, e.g. minimal wire overlaps
- Implemented a deterministic groups-colouring scheme with pure functional programming

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
- Utilized OpenCV to troubleshoot and develop algorithms for precise robot localization inside the maze

Traffic Sign Recognition Research, CIS online Project |**Link to Publication**   *Jul - Sep 2022*
- Studied and investigated numerous cutting-edge papers on Computer Vision and Machine Learning
- Reproduced SOTA's accuracy in Traffic Sign Recognition, published a paper on potential improvements