Jonathan (Jintong) He

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EDUCATION

Carnegie Mellon University Pittsburgh, Pennsylvania
Master of Science in AI Engineering – Mechanical Engineering Dec 2025
Current Coursework: Introduction to Machine Learning, Introduction to Deep Learning, Computer Vision
University of Wollongong Wollongong, Australia
Bachelor of Engineering (Honors) in Mechatronic Engineering July 2023
WAM: 89.2/100, Dean's Merit List

SKILLS

Programming Languages: Python, SQL, C/C++
ML Frameworks: PyTorch, TensorFlow, Scikit-learn
Deep Learning: CNNs, Vision Transformers, OpenCV, Linux, Git, GitHub, Docker, Google Cloud
Data Science: Pandas, NumPy, SciPy, Matplotlib, Seaborn, Apache Spark, PostgreSQL, Oracle
Languages: English (Fluent), Chinese (Native)

PROFESSIONAL EXPERIENCE

Zhongke Xingqi Technology Co., Ltd Beijing, China
Machine Learning Engineer Aug 2023 - Jun 2024
• Led a team of five in developing object detections and segmentations on satellite images leveraging deep learning models such as YOLOv8, DeepLab and ViT, achieving over 90% precision and recall
• Transformed detection models into inference APIs using Flask, ensuring seamless integration on web services and lowering deployment time by 30%
• Optimized speed utilizing multiprocessing across 8 V100 GPUs, reducing runtime to under 1 second per image
• Mentored new employees in model training, deployment, and optimization, accelerating integration and improving team productivity

Feng Bian Technology Co., Ltd Beijing, China
Data Analyst Oct 2021 - Jan 2022
• Collaborated with a cross-functional team to refine company advertising strategies by conducting surveys of over 10,000 customers, gathering insightful data for analysis
• Enhanced company advertising strategies by cleaning and analyzing data leveraging Pandas and SQL, resulting in an 8% increase in overall profit
• Presented key insights to stakeholders through detailed charts and diagrams created with Seaborn and Matplotlib, facilitating more informed decision-making

ACADEMIC PROJECTS

A Defect Detection System for Wire Arc Additive Manufacturing (WAAM) Wollongong, Australia
University of Wollongong Jul 2022 - Jul 2023
• Designed a deep learning-based welding defect detection system, obtaining a 99.71% F1 score
• Partnered with fellow PhD students to overcome challenges in extracting current and voltage signal features during welding, improving overall precision by 5%
• Presented project progress to supervisor using detailed literature reviews and Matplotlib charts, fostering agile project development

Pedestrian and Cyclist Recognition System (PACR) Wollongong, Australia
University of Wollongong Feb 2022 - Nov 2022
• Developed a driver assistance system utilizing MobileNetV2 and IR switching cameras to enhance road safety by detecting pedestrians and cyclists in real-time, achieving a detection rate of 18 FPS
• Directed the integration of hardware and software on Jetson Nano platform, including camera calibration and real-time processing, leading to 25% gain in performance across varying lighting conditions
• Conducted market and competitor analysis to position PACR in the Advanced Driver Assistance Systems (ADAS) market, targeting legacy vehicles for increased safety
• Applied agile project management, leading a cross-functional team through iterative development cycles, achieving project milestones on time and within a strict budget of $350