HAO-CHENG KAN

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EDUCATION

Peking University
Master of Computer Applied Technology — Sep 2021 - Jun 2026

- Academic Excellent Awards (Apr 2024)

Lunghwa University of Science and Technology
Master of Business Administration in Information Management — Aug 2015 – Jun 2017
Bachelor of Business Administration in Information Management — Aug 2011 – Jun 2015

- Academic Excellent Awards (Nov 2012, Apr 2013, Oct 2013 and May 2014)
- Minors: Financial Technology; Innovative Entrepreneurship

PROFESSIONAL SKILLS

Typesetting Systems	LaTeX , Microsoft Word
Programming	R, PHP, JavaScript, Java, Python, C Sharp, Visual Basic
Website	HTML5 and CSS
Server	Ubuntu, RedHat, SuSE, Windows Server
Database	MariaDB, Oracle 11g, MS SQL, Hadoop
Project Management	GitHub, Git
Web Framework	Laravel, Angular, React, Vue, Python Flask
DevOps	Docker, AWS
Machine Learning Framework	TensorFlow, PyTorch

EXPERIENCE

Hon Hai Precision Industry Co. Ltd — Jun 2024 - Mar 2026
Engineer — *Shenzhen*

- Embedded Systems and AIOT Technology: Integrate embedded systems with AIOT technology for the development of robots and optimization of industrial production lines.
- Artificial Intelligence and Deep Learning: Utilize artificial intelligence and deep learning techniques to enhance the accuracy and efficiency of industrial inspection, including applications like image segmentation.
- Improvement of Industrial Production Lines: Achieve automation and intelligence in industrial production lines through the use of embedded systems, AIOT, and artificial intelligence technologies, thereby improving production efficiency and product quality.

Peking University — Sep 2021 - Jul 2023
Engineer, Administrative Assistant, and Teaching Assistant — *Shenzhen*

- Web system maintenance
- Teaching assistant for courses in artificial intelligence and cryptography
- Responsible for performing paperwork in the general office.

OxBridge Consulting Inc — Dec 2018 – Jul 2020
Engineer — *Taipei*

- Front-end and back-end development, and user interface design
- Conducting systems function tests
- Programming languages and software employed: JavaScript, AngularJS, PHP, CSS, MySql, AWS, and Ubuntu Server

Compulsory Military Service — Dec 2017 – Dec 2018
Corporal — *Taichung*

- Participating in military trainings and assistance in disaster relief
- Team management, including daily service support, counselling, new recruit orientation, etc.

Lunghwa University of Science and Technology Aug 2014 – Aug 2016
Lab and Teaching Assistant *New Taipei*

- Network equipment implementation and maintenance
- Assistance in the teaching and assignment grading for courses on Linux Server and R programming

JGNet Taiwan May 2014 – Aug 2014
Network Engineer *Taoyuan*

- Broadband network design, installation and maintenance for residential communities

PROFESSIONAL CERTIFICATIONS

- e-Enterprise Data Analyst, 2016
- Red Hat Certified System Administrator (RHCSA), 2015
- Novell Certified Linux Administrator (NCLA 11), 2014
- Oracle Certified Expert (OCE 10g), 2014
- Oracle Certification for Java Programmer (OCJP 6), 2013
- IPMA Certified Project Management Associate (Level D), 2013

RESEARCH/PROJECTS

OTTER: Optimized Training with Trustworthy Enhanced Replication via Diffusion and Federated VMUNet for Privacy-Aware Medical Segmentation (2025)

- Description: Proposed OTTER, a privacy-aware medical image segmentation framework integrating diffusion-based generative models with federated learning. The method generates high-fidelity synthetic medical images to augment limited datasets while protecting sensitive patient data. A Bayesian filtering mechanism removes unreliable samples before training. Combined with a federated VMUNet architecture, the framework enables collaborative training across decentralized institutions and improves segmentation accuracy and robustness on public datasets.
- Keywords: Federated Learning, Diffusion Models, Medical Image Segmentation, Privacy-Preserving AI

The Impacts of China's Deleveraging on the Chinese Economy (Jan 2019 – Dec 2019)

- Description: This research first used the DSGE model to analyze the volatility of China's total output value, annual interest rate, and inflation rate for the overall economy of China from 1992 to 2017. Then, using the VAR, it found that the deleveraging of non-financial enterprises had short-term negative impacts on the overall economic growth rate, which would decrease with time. In the long run, the deleveraging of non-financial enterprises had minimal impacts on the overall economic growth rate.
- Keywords: Dynamic Stochastic General Equilibrium (DSGE), Vector Autoregression Model (VAR), macroeconomics, deleveraging, business cycle, Basel III, shadow banking system, H-P filter

A3S Academic Achievement Analysis System (Aug 2015 – Sep 2017)

- Description: This project developed an interactive academic achievement analysis system, analyzing students of information management at Longhua University of Science and Technology, who entered after 2008, by their performance in different types of courses, their economic conditions, and post-graduation employment. It can thus predict the career development after graduation based on individual students' initial conditions.
- Hao-Cheng Kan & Fang-Ling Lin (10 Dec 2016). The Impact of Student Loans on Academic Performance: A Cluster and Visual Analysis. presented at the 22th CSIM IMP, Taichung, Taiwan.
- Programming languages and software employed: R, RShiny Server, MariaDB, and Ubuntu Server

S-Gate e-Learning and Classroom Management System (Aug 2013 – Aug 2015)

- Description: Developed a mobile e-campus teaching system that streamlined classroom management and student affairs, including Bluetooth-based attendance tracking and real-time mobile interactions such as content delivery, assessments, group discussions, and Q&A.
- Programming languages and software employed: Node.js, JS, PHP, MariaDB, Android, and Ubuntu Server