Hengtai Jan

🎓 [PhD](#)., Physics, [NSYSU](#) 2004 - 2010 ([publish](#))
🎓 MD&BD, Physics, [NKNU](#) 1998-2004

---

in [linkedin.com/in/hengtai-jan-188793b8](#)

⬡ [github.com/zarda](#)

✉ [zardazero@gmail.com](#)

📞 +886 0928796022

Technical Skills

Languages: TypeScript, HTML, CSS, Python, C++, Java
Frontend: Angular, React, Material UI, Responsive Design, I18n, A11y
Testing: Angular Material Harness, E2E Testing, Integration Testing, CI/CD
Backend & Infrastructure: RESTful APIs, gRPC, WebSocket, Node.js, GCP, MySQL

Professional Experience

Software Engineer (TVC) — [Google Nest](#)
New Taipei City, Taiwan | Oct 2021 – May 2025

Tech Stack: Angular (TypeScript), Java, GCP, Node.js

- Developed web [applications](#) to enhance developer experience for smart home connectivity, owning 85% of project deliverables,
- Built a Matter device [simulator](#) enabling 3rd-party engineers to test integrations with their services (75% task ownership)
- Refactored application architecture, reducing initial load time by 20% and improving scalability for new features
- Increased test coverage on Google Home Playground from 55% to 93%+ using Angular Material component harnesses
- Implemented internationalization (I18n) and accessibility (A11y) to ensure inclusive user experience
- Collaborated with UX designers to refine UI components and deliver on design specifications
- Led Material UI migration to latest version, resolving all breaking changes and compatibility issues
- Extracted reusable modules from existing functionality for cross-project adoption
- Extended RESTful APIs on HTTP/2 to support new frontend features and integrate with Home API services

Software Engineer — [Academia Sinica](#)
Taipei, Taiwan | Jun 2018 – Jul 2021

Tech Stack: React (TypeScript), C++, Python, Node.js, MongoDB

- Developed full-stack web [application](#) for astronomical scientists to view and analyze high-resolution imagery
- Optimized frontend rendering performance using WebGL and C++ bindings in JavaScript
- Built E2E testing pipeline for UI and integrated it into CI workflow
- Achieved 90% API test coverage through integration testing with mock frontend
- Collaborated with scientists to design new features including 2D/3D image export and new file format support
- Extended WebSocket API with Protobuf and float compression for efficient data transfer
- Ported functionality from a 20-year-old legacy library to modern codebase

Software Engineer — [Horng Terng Automation](#)
Kaohsiung, Taiwan | Sep 2017 – May 2018

Tech Stack: C# (WPF), C++, Halcon, SQLite

- Developed customized optical inspection desktop applications for clients including ASE Inc.
- Owned 50% of project deliverables for on-site and in-house inspection solutions

Software Engineer — NSRRC

Hsinchu Science Park, Taiwan | Sep 2015 – Aug 2017

Tech Stack: C++, Python, JavaScript, MySQL, Shell

- Developed and maintained beamline control systems for distributed devices
- Led data center project providing services to all facility users

Post-doctoral Researcher — NHRI

Zhunan, Taiwan | Sep 2011 – Aug 2015

Tech Stack: C++, Python, MATLAB

- Researched human brain networks using MRI data analysis
- Implemented image processing algorithms and data analysis pipelines