# Yong-Xiang Zhan (Loki, 詹詠翔)

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## Education

**NYCU WinLab** 2025–Now
M.S. Computer Science (Advisor: Chien-Chao Tseng)
- Research: automated frequency coordination (AFC) for 6 GHz Wi-Fi and its compliance testing

**NTUST** 2021–2025
B.S. Electronic Engineering
- Capstone: FPGA data system for a lunar magnetometer

## Experience

**NYCU WinLab** 2025–Now
Builds and runs the lab's services (Portal, Carrel, Video and the lab website)
- Carrel: every member asks an agent for machines on the lab's Proxmox VE cluster, through one MCP endpoint
- Portal: one site for the lab's meetings, door access, orders and paperwork, open to agents over MCP

**MediaTek** 2026
Instructor, Claude Code course (80 attendees)
- Wrote the course, Claude Code CLI: Concepts and Practice, and built its hands-on lab platform

**Clounix** 2024–2025
Intern, SONiC switch test automation (May 2024 to May 2025)

**Shalu Vocational High School** 2022–2024
Volunteer coach, skills competition

## Publications

[1] **Y.-X. Zhan**, C.-Y. Huang, C.-C. Tseng, Z.-H. Wu, J.-L. Lin, J.-R. Li, and Y.-M. Chen, "An Automated and Optimized Framework for 6 GHz Wi-Fi AFC Compliance Verification," in *Proc. IEEE VTS Asia Pacific Wireless Communications Symposium (APWCS)*, 2026, pp. 236–240. doi:10.1109/APWCS71511.2026.11742901

[2] **Y.-X. Zhan**, C.-Y. Huang, C.-C. Tseng, Z.-H. Wu, J.-L. Lin, J.-R. Li, and Y.-M. Chen, "6 GHz Wi-Fi 自動頻率協調系統之 DUT 測試環境自動化改良," in *Proc. Taiwan Academic Network Conference (TANET)*, 2025.

[3] J.-D. Lin, C.-Y. Huang, S.-H. Lin, W. Chen, and **Y.-X. Zhan**, "CodedMyRoute: Design and Implementation of Software Defined Reliable Routing Scheme for Satellite IoTs," in *Proc. IEEE VTS Asia Pacific Wireless Communications Symposium (APWCS)*, 2025, pp. 1–5. doi:10.1109/APWCS67981.2025.11151927

[4] P.-Y. Ho, L. Lee, Y.-T. Kuo, C.-C. Chien, **Y.-X. Zhan**, M.-H. Ho, C.-Y. Huang, Y.-M. Chen, C.-L. Lin, C.-H. Wu, and C.-C. Tseng, "Exploring Automated Frequency Coordination System for 6 GHz Wi-Fi in Taiwan," in *Proc. International Computer Symposium (ICS)*, 2024, pp. 139–144. doi:10.1109/ICS64339.2024.00032

## Projects

14 of 33, all at www.zyx.tw/info

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|---|---|---|---|
| **AIntern** | An AI intern for any team | *Next.js, Postgres, Docker runners, bubblewrap* | 2026 |
| **Carrel** | Lab machines, asked for in words | *Go, Proxmox VE, MCP, Keycloak* | 2026 |
| **Golem** | Keeps watch over my services | *TypeScript, Bun, SQLite, MCP* | 2026 |
| **Plump** | SVG to 3D | *Next.js, three.js, WebGL* | 2026 |
| **Sensorium** | Observability for agents | *TypeScript, Postgres, OpenTelemetry, MCP* | 2026 |
| **NYCU AI** | NYCU Office of AI Affairs | *Next.js, Postgres, Better Auth* | 2026 |
| **WinLab Portal** | WinLab's member portal | *Next.js, Postgres, Keycloak, MCP* | 2026 |
| **aias** | A model and app store for Windows | *Go, TypeScript, Python, OpenVINO* | 2026 |
| **sense** | Hearing and sight for Claude Code | *Swift, Python, Claude Code* | 2026 |
| **quickvm** | A software KVM over QUIC | *Rust, QUIC, Swift* | 2026 |
| **PerfectSocket** | Reliable UDP with Reed-Solomon | *Python, zfec, Docker* | 2025 |
| **mmwave-dashboard** | A live map of mmWave nodes | *Next.js, Prisma, Postgres, Google Maps* | 2024 |
| **openwifi-afc** | Experimental AFC on openwifi | *Python, openwifi, ZedBoard, OpenAFC* | 2024 |
| **jenkins-terminal** | A terminal client for Jenkins | *Python, Typer, PyPI* | 2024 |

## Awards and certificates

**Level B technician, computer hardware fabrication** Ministry of Labor 2021
**1st place in computer repair** National Vocational High School Skills Competition 2020
**Level C technician: hardware, software design, software application** Ministry of Labor 2019–2020