

Yen-Chu Tsai

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🌐 <https://yenchutsai.xyz>

Employment History

- Sept. – Dec. 2026 ♦ **Teaching Assistant**, Machine Learning.
- June – Sept. 2026 ♦ **Software Engineering Intern**, Pixel Onboarding Team, Google.
- Sept. – Dec. 2025 ♦ **Teaching Assistant**, Algorithm Design and Analysis.
 ♦ **Teaching Assistant**, Formal Languages and Automata Theory.
- July – Aug. 2025 ♦ **Summer Intern**, Graph Streaming Algorithms, Academia Sinica.

Education

- 2023 – 2027 ♦ **BSc., Department of Computer Science** National Taiwan University.
- Sept. – Dec. 2025 ♦ **Fast Graph Algorithms Lab** National Taiwan University.
 ♦ **Vision & Learning Lab** National Taiwan University.

Projects

- ♦ **Setup Wizard UX Enhancement** - Intern Project at Google (Summer 2026)
 1. Developed an event-driven approach for sideload detection, enabling a smoother QA testing process.
 2. Incorporated a WiFi QR code scanner into network setup, reducing friction for new Android users.
- ♦ **Warehouse Spatial Intelligence** - DLCV (Fall 2025)

Developed a VQA model capable of understanding fine-grained 3D spatial relationships in warehouse environments. Achieved 92.69 accuracy on the test set, ranked 2nd place in class among 14.
- ♦ **Streaming bounds on the Turán problem** - Research Project (Summer 2025)

Investigated the streaming bounds on the Turán problem (detecting subgraphs) and found polynomial gaps between when the target graph is bipartite versus non-bipartite.
- ♦ **Activity Recommendation System** - Web Retrieval and Mining (Spring 2025)

Developed a recommendation system capable of rapidly adapting to new users by leveraging LLM-augmented data for personalized activity suggestions.

Skills

- Languages ♦ English, Mandarin Chinese.
- Coding ♦ C, Python, Kotlin, Java, $\LaTeX$, Markdown, ...
- Misc. ♦ Linux, Git, Docker, Android, ...

Relevant Coursework

- Algorithms & Theory ♦ Linear Algebra, Algorithm Design and Analysis, Data Structures and Algorithms, Graph Theory and Applications.
- Systems ♦ Systems Programming, Operating Systems, Computer Networks.
- AI/ML ♦ Web Retrieval and Mining, Machine Learning, Deep Learning for Computer Vision.