

**Tsung-Yi Ma**

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## Work Experience

**Research & Development Engineer, ASUSTEK COMPUTER INC.**

*2023–present*

- **Production Scheduling Optimization System:**

- Utilized mathematical expertise to streamline the size of mathematical models, reducing execution time from over a day to within an hour.
- Adapted original models to meet specific production rules and requirements.

- **GAI Recruiter System:**

- Implemented a sliding window approach to enable real-time speech recognition using the Whisper model.
- Reduced error rates by leveraging contextual information and fine-tuning parameters such as `vad_filter` and `no_repeat_ngram_size`.

## Education

**Master of Mathematics, NATIONAL TAIWAN UNIVERSITY**

*2021–2023*

- **Master's Thesis:** Introduction to the Ising Model and the Ising Model with Disorders:

- Applied probability methods to investigate disordered statistical physics models.

- **Teaching Assistant:** Mathematical Analysis, Probability Theory.

- **Courses:**

- Data Structure and Algorithm, Machine Learning: Completed programming tasks using Python and C.
- Mathematics: Completed over 100 credits of math courses during undergraduate and master's studies.

**Bachelor of Mathematics, NATIONAL TAIWAN UNIVERSITY**

*2017–2021*

- **NCTS Undergraduate Research Program:** Noncommutative Probability Theory:

- Participated in a study group hosted by the Quantum Computing Research Center of Hon Hai Research Institute (鴻海研究院).

**Class of Science (科學班), TAIPEI MUNICIPAL CHIEN KUO HIGH SCHOOL**

*2014–2017*

## Awards

- NCTS Undergraduate Summer Research Program.
- Symposium for Young Analysts at National Central University.
- The Phi Tau Phi (斐陶斐) Scholastic Honor Society of the Republic of China Honorary Membership.

**Skills:**

Python, C++, Git, Linux, SQL, L<sup>A</sup>T<sub>E</sub>X

**Hobbies:**

Juggling