

# Michelle Ding

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## Education

2021–  
May 2025      **The University of Texas at Austin**  
BS in Computer Science and BS in Mathematics, with a Minor in Business  
CS Turing Scholars Honors Program

## Publications

Jul 15, 2024      George Tsoukalas, Jasper Lee, John Jennings, Jimmy Xin, MD, Michael Jennings, Amitayush Thakur, Swarat Chaudhuri. **PutnamBench: Evaluating Neural Theorem-Provers on the Putnam Mathematical Competition** <https://arxiv.org/pdf/2407.11214>.

## Research

May 2024 -  
Oct 2024      Research Assistant for the **Trishul Lab** at UT Austin.  
Developed benchmarks for testing Neural Theorem-Provers on the Putnam Mathematical Competition. Won **Best Paper** at the ICML 2024 AI for Math Workshop. NeurIPS 2024.

Jun 2024 -  
Aug 2024      Research and Development Intern for **Trend Micro** at Austin, TX.  
Created structured output logging for internal weekly test automation framework. Relevant tools: Python, MySQL, Docker, Jira, Azure Data Studio.

Nov 2023 -  
Feb 2024      Research Assistant for the **IFML Lab** at UT Austin.  
Experimented with LLMs, vector databases, and chatbot RAG algorithms to enhance the accuracy and reliability of generative AI models for identifying NeurIPS papers. Manuscript.

May 2023-  
Aug 2023      Research Assistant for the **Spectral guarantees for adversarial streaming PCA**.  
Eric Price. Spent a summer researching a manuscript for  $k$ -spectral guarantees, with the goal to extend the current paper's argument beyond the top  $k$  eigenvalues.

Jun 2022  
Dec 2022      Research Assistant for the **UToPiA Lab** at UT Austin.  
Isil Dillig. Created a GUI for batch image processing using program synthesis. Relevant tools: Flask, Python, openCV, Amazon Rekognition Software.

Jun 2022  
Jul 2022      Research Assistant at the **J.J. Pickle Quantum Optics Laboratory** at Austin, TX.  
Noah Davis. Used class 3B Laser systems to replicate state tomography and Bell's Inequality experiments. Poster.

## Teaching

Fall 2024      Undergraduate Grader for **Introduction to Quantum Information Science** at UT Austin.  
Scott Aaronson. Undergraduate course.

2023      Teaching Assistant for **Quantum Computing Freshman Research Initiative** at UT Austin.

Noah Davis. Two-semester course. Led daily in-class activities for a third of the students in the class, hosted office hours, and graded exams, homework, and daily exercises.

*Fall 2022* Teaching Assistant for **Discrete Mathematics: Honors** at UT Austin.  
Isil Dillig. Led discussion sessions, hosted office hours, and graded exams and homework.

## Scholarships, Grants & Fellowships

*Aug 2024* Leonard E. Huber Endowed Scholarship - \$3,000  
*2022* Freshman Research Initiative Summer Fellowship - \$2,000  
*Aug 2021* Ada Mae Janick Marshall Endowed Presidential Scholarship - \$3,500  
*2020* National Office of Mu Alpha Theta Summer Grant - \$2,000

## Awards & Honors

*Mar 2023 - Present* Officer / Core Problem Writer for **UT Programming Contest (UTPC)** at UT Austin. Initiate and implemented written problem editorials which are now publicly available after every contest on Codeforces and Discord. Additionally: write problems for biweekly contests and annual UT Open contest held on the Codeforces platform.

*Mar 2023 - Aug 2024* Vice President for the **Mathematics Club** at UT Austin. Obtained for all students access to free MAA weekly journals sponsored by the Math Department, revived the discontinued tradition of hosting Putnam practice sessions on campus, and created and maintained the club's official website. Additionally: recruit speakers and organize events.

*2020, 2021* Two-time AIME Qualifier at John Foster Dulles High School.

*Mar 2020* 1<sup>st</sup> Place Winner of the American Protégé International Music Talent Competition.

## Skills and Certifications

*2024* Editor for the upcoming book *Integrals and Sums Fiesta II*.

*Languages* **General:** Java, C/C++, Python, Coq, Lean, PyTorch, SQL.  
**Quantum:** Qiskit, Q#.  
**Other:** English, Chinese, and intermediate Japanese.

*2023* CPR/AED certified, expires Jun 2025.

*2020* US Figure Skating, Silver Level.

*2018-2020* Assistant Coach for **Skate Therapy**, Sugar Land, TX. Planned weekly activities and led on-ice skating sessions for people with physical and developmental disabilities.

*Last update: January 2025*