

**Cheng-chia (Justin) Lee**

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## Research Focus

Physics-informed machine learning (PIML) with emphasis on heterogeneous boundary and interface problems. Interests include PINNs, multi-objective optimization (e.g. NSGA-II), and algorithmic structures inspired by numerical methods.

## Education

Hsinchu International Academy - Hsinchu, Taiwan

GPA: 4.41 / 4.00 AP Courses: Macroeconomics, Calculus BC, CSP, CSA, Psychology, Chinese, Chemistry, Pre-Calculus

High Honor Roll (2023, 2024, 2025)

## Research & Projects Author

- IEEE Transactions on Evolutionary Computation (TEVC) | Manuscript in Preparation | 2025 Hybridizing multi-objective evolutionary algorithms with reinforcement learning for dynamic path planning.
- Youth Turing Program (YTP) Stage II | Project-Based Research | 2025
- iGEM | 2025

## Programs

- Mathematics and Science Talent Cultivation Program — NTHU | Sep 2023–present
- Mathematics and Science Talent Cultivation Program — NTU | Sep 2024–2025

## Awards & Honors

- USACO Gold Medalist (2024–Present)
- USA Junior Mathematical Olympiad (USAJMO) Qualifier (2025)
- AIME II: 12/15 — Tied 1st in Taiwan (2025)
- Taiwan Olympiad in Informatics Selection — Rank 122 Nationwide (2025)
- AMC 10A — National Top 0.4% in Taiwan (2024)
- AMC 12A — National Top 0.8% in Taiwan (2025)

## Service

- Student Teacher (Volunteer) — Emei Elementary School | 2024-present
- Student Volunteer — Ton-Yen General Hospital | Jul 2024
- Volunteer — Hsinchu Nanliao Harbor | Mar 2025