

Daniel Yang

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EDUCATION

Indiana University, Bloomington – Bloomington, IN

Dec 2027 | GPA: 3.81/4.00

- **Majors:** Mathematics, Computer Science, Finance; **Minors:** Statistics, Economics, Data Science
- **Awards:** 5× U.S. Mental Math Champion (1st place, 2021), Chess (2000 ELO), Blindfold Chess (1200 ELO)
- **Technical Skills:** Python, C++, SQL, Java, NumPy, pandas, SciPy, scikit-learn, Linux, R
- **Relevant Coursework:** Probability Theory I & II, Differential Equations I & II, Calculus I–IV, Linear Algebra, Mathematical Finance, Machine Learning, Statistical Analysis in R, Discrete & Data Structures

EXPERIENCE

Professional Online Poker Player

Jan 2026 – Present

- Earned over \$125,000 in personal profit playing high-stakes North American No-Limit Hold'em cash games
- Achieved a long-run win rate of approximately 10 BB/100 over 200,000+ hands in multiple cash-game formats, including deep-stacked big-blind ante and straddle games at stakes up to \$25/\$50
- Developed exploitative strategies through Hand2Note database analysis, identifying statistically significant population deviations from game-theory optimal (GTO) play and constructing node-locked counterstrategies

Mercor AI

Feb 2025 – Aug 2025

Applied Engineer (Full-Time)

- Collaborated with an OpenAI research lab to scale the math training data for o3 by producing 5,000+ high-quality solutions across calculus, linear algebra, differential equations, statistics, and probability theory
- Leveraged NumPy, SciPy, and R to perform numerical analysis, validate integrals, and conduct statistical tests
- Promoted to reviewer for top 10% performance and a 0.05 major issue rate following an 80% team reduction; resolved conflicting trainer evaluations and made final quality determinations on edge cases

US Mental Math Federation

Oct 2020 – Oct 2024

Mental Math GO World Champion

- Placed 1st overall in 2021 out of 5,000+ participants and competed in highest international division for five consecutive years; set a competition record of 45 six-digit division problems solved in 90 seconds at 98% accuracy

ACTIVITIES & PROJECTS

Population Modeling for No-Limit Hold'em

Apr 2026 – Present

- Analyzed 30M+ online poker hands (200NL – 5kNL) across 100+ game states spanning positional configurations, board textures, and betting sequences, benchmarking population behavior against solver outputs
- Developed implementable decision frameworks by quantifying the impact of simplified strategies, establishing practical heuristics that preserved over 99% of equilibrium value while reducing execution complexity
- Derived exploitative adjustments to GTO by integrating population tendencies into node-locked simulations, restructuring betting patterns to capitalize on population leaks, increasing expected pot share by up to 5%

Quantitative Finance Society

Aug 2024 – Present

Co-Founder

- Organized a Jane Street-sponsored Estimathon for 60+ participants, collaborating directly with recruiters on event planning, competition logistics, and distribution of company-provided problems and referral prizes
- Mentored 25+ members pursuing quantitative trading by reviewing resumes, recommending technical projects, explaining career expectations, and providing guidance throughout the recruiting process

Blackjack Strategy Optimizer

Mar 2025 – Aug 2025

- Built a Monte Carlo simulator improving on blackjack basic strategy by 0.2% through real-time card depletion, modeling specific EV shifts by distinguishing between equivalent totals ($16 = 5+7+4$ vs. $10+6$) in one-deck games
- Performed a chi-square goodness-of-fit test on 10,000+ bets to evaluate outcome distribution fairness in Bovada's blackjack engine; leveraged matplotlib and pandas for visualization and expected return breakdowns by action