

# Daniel K. Chuang

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## Education

**Cornell University** (GPA: 3.92 / 4.00, SAT: 1550 / 1600)

B.A. Computer Science, B.A. Mathematics

**Ithaca, NY**

August 2022 - TBD

- *Professional Involvements* - SIG Trading Discovery Day, D.E. Shaw Connect, Google Intern Insider, BNP Paribas S&T Summit, JP Morgan Insights Summit, Goldman Sachs Virtual Insights, Codepath Student
- *Technical Skills* - C/C++ (threading, OpenMP, smart ptrs), Excel (Solver, PivotTable, Regressions), SQL, Python [Pytorch, OpenCV, NumPy, Pandas, Flask], R [tidy, shiny], Git/Github, Linux, HTML/CSS/Javascript [D3.js, P5.js, React], Swift [UIKit, SwiftUI, Alamofire], OCaml, Docker, Google Cloud
- *Math Courses* - Ordinary Differential Equations, Theoretical Linear Algebra, Numerical Analysis (Linear), Applied Complex Analysis, Multivariable Calculus, Discrete Math, Probability Theory, Game Theory, Applicable Algebra
- *CS Courses* - Deep Learning, Machine Learning, Systems Programming, Computer Organization, Analysis of Algorithms, Data Structures and Algorithms, Functional Programming, iOS Development, Backend Development, React-based Web Development
- *Distinctions* - [AppDev Hackathon Best App](#), [MIT Grand Prix Winner](#), [Berkeley Racing Record + Paper](#), Midwest Political Science Association Publication, National Merit Scholarship Winner, William J. Branstrom Award

## Work Experience

**Google**

*Software Engineering Intern*

**Location TBD**

Starting September 2025

**Bridgewater Associates**

*Investment Engineering Intern*

**Westport, CT**

Starting June 2025

**AlgoLink (FinTech Startup)**

*Machine Learning Engineer (Part-Time)*

**Remote**

June 2024 - December 2024

- Brainstorming with a four-person team on how to vectorize technical skills from assessments, generate new interview questions and evaluate interview responses for the startup's enterprise and consumer businesses, which connects firms to talent
- Scraping 2000+ questions from Leetcode, "A Practical Guide To Quantitative Finance Interviews," and more to train our models
- Developing proprietary algorithms for dynamic quantitative assessments and creating AWS S3 data infrastructure to store their data

**Federal Reserve Bank of New York, LISCC Supervision (received return offer)**

*Quantitative Market Risk Intern*

**New York, NY**

June 2024 - August 2024

- Reviewing market-making ML algorithms used by Sales & Trading desks from GS, JPM, BAC, CITI, and MS for fixed-income products (treasuries, interest rate swaps) responsible for thousands of bond and swap RFQs daily
- Analyzing sensitivities (greeks) for trading activity for the biggest banks in America using R for the Fed's quarterly market risk report
- Examining banks' credit risk and processes on-site for Wealth Division / Private Bank loans for portfolios worth trillions

**Federal Reserve Board of Governors, LISCC Supervision (received return offer)**

*Summer and Year-Round Quantitative Developer Intern, Trading and Capital Markets*

**Washington D.C.**

August 2023 - May 2024

- Developing and presenting a market risk application for the Board's LISCC banks (e.g., Goldman Sachs, J.P. Morgan Chase, Bank of America), summarizing billions of dollars of P&Ls, VaRs, and p-values for the division's principal economists and regulators
- Created a four-faceted classification algorithm to determine the asset type for 1,200 market-making trading desks through text analysis, P&L Limits, and realized P&L data for use throughout the Board's Mission Critical divisions
- Automated daily data collection for the 8 biggest U.S. banks, saving 30 minutes of manual data collection per day
- Presented in a Federal Reserve-wide showcase, representing my team and our work

## Leadership

**Cornell App Development**

*Software Engineer*

**Ithaca, NY**

February 2024 - Present

- Developed an end-to-end Millennium Management-sponsored "sports derivatives trading" iOS app in collaboration with the firm's Head of Execution Technology, spearheading the frontend implementation and the design of the game economy
- Created Truscoop end-to-end, a full-stack AI news app that provides an NLP summary and classification of the political bias of any article with Docker + Google Cloud deployment and concurrent networking

## Projects

- Python: Min-max alpha-beta pruning Connect-4 AI, with nine move search depth
- Python: PID autonomous racing agent for MIT Lincoln Labs using Computer Vision, first-place solution
- Python: Empirical Risk Minimization with Adagrad gradient descent on Hinge, Logistic, and Ridge loss functions with 97% classification accuracy on a text-based dataset
- C++: Optimized infinite size integer class for parallelized RSA encryption and decryption
- C++: 8-bit floating point class, with applications to AI efficiency
- OCaml: Programming language interpreter for "OCaml within OCaml"

**Interests:** Skiing, Weightlifting, Rubik's Cubing, Poker, Youth civic engagement, Generative Art