

# DANIEL CHENG

✉ cheng24d@gmail.com  
☎ (919) 869-9791  
📍 460 W Chicago Ave  
Chicago, IL 60610

## Objective

Data-driven student at Duke University studying Computer Science and Economics. Interested in opportunities in quantitative trading and decentralized finance (DeFi).

## Education

Duke University Aug. 2021 - May 2024  
B.A. Computer Science, Economics Minor  
Cumulative GPA: 3.7; 2021-2022 Dean's List

The University of North Carolina at Chapel Hill June 2020 - May 2021  
Transferred after Freshman Year

## Quant Finance

**Akuna Capital** Chicago, IL  
Options 201 Course Oct. 2022

**BP p.l.c.** Chicago, IL  
Trading & Shipping Sophomore Experience June 2022  
(SophEx)

**Flow Traders** New York City, NY  
Summer Trading Business Course May 2022

## Coursework

- Blockchain and DeFi
- Advanced Spreadsheet Modeling for Business
- Data Structures and Algorithms
- Advanced Probability
- Combinatorics
- Discrete Mathematics
- Multivariable Calculus
- Statistics and Econometrics
- Financial Accounting
- Intermediate Micro & Macro Economics
- International Economics
- Design and Analysis of Algorithms
- Behavioral Finance
- Private Equity
- Shakespeare and Financial Markets

## Interests

- Duke Basketball
- Classical Music
- Tennis
- Poker
- Hot Pot

## Work Experience

**4170 Trading** Chicago, IL  
**Trading Analyst** July 2024 - Current  
Studied options theory and treasury bond basis and cash trading theory. Reconciled daily risk metrics and trading margin using FICC VaR and FCM margin for cash and oil trading desks. Utilized Bloomberg Terminal and FINRA TRACE to assist traders with trade entries during Treasury Auctions. Working on several trading operations projects like managing internal REGCAP bash scripts, developing interactive risk management GUIs for traders, and writing python scripts to automate internal total equity and carry interest calculations.

**IMC Trading** Chicago, IL  
**Quantitative Trading Intern** June 2023 - Aug. 2023  
Studied options theory and market making and participated in mock trading on simulated exchanges. Performed trade analysis on lead/lag relationships on NQ futures and QQQ ETFs and price improvement auctions on SPX. Developed value-based market making trading strategies for various pharmaceutical stocks. Researched Federal Funds Rate (FFR) Futures and Secured Overnight Financing Rate (SOFR) Futures futures to price premium rate margins for SPX Option pricings and develop trading and hedging strategies. Analyzed SPX market data to find implications of FFR futures on SPX option implied rate movements.

**Cetera Financial Group** El Segundo, CA  
**Finance Intern** June 2022 - Aug. 2022  
Prepared loan documentation and developed amortization schedules for month-end close. Assisted with data reconciliation on various financial databases. Posted journal entries and adjustments in accordance with reporting requirements and documented Key Account Information for general ledger accounts. Ran various reports needed for data using Oracle and various other systems.

**Parata Systems** Durham, NC  
**Engineering Intern** June 2021 - Aug. 2021  
Designed a mechanical method and user interface to improve pharmaceutical packaging efficiency by 6%. Identified hardware and software bugs in proprietary machines and analyzed the impact of different input variables on its efficiency. Developed correlation and risk matrices and implemented hardware iterations that improved manufacturing synergies by 13%.

**Duke University** Durham, NC  
**Research Intern** June 2018 - June 2019  
Conducted genomic data analyses for a novel method to predict and monitor acute kidney transplant rejection through blood tests. Analyzed the correlations in skin graft transplant rejection rates between Fed and Fasted C57BL/6 lab mice. The two projects have been published in peer-reviewed research journals *Theranostics* (Impact Factor 11.6) and *Transplantation* (Impact Factor 4.9).

## Projects / Publications

**Blockchain Decentralized Application (dApp)** Jan. 2022 - Apr. 2022  
Designed and presented a decentralized sports betting platform with both order book and constant-product Automated Market Maker (AMM) functionalities to a panel members from Duke Blockchain Lab.

**The Effects of Undernutrition on Patient Transplant Infection** June 2018 - Dec. 2021  
Researched and analyzed data of tested C57BL/6 mice with skin grafts to determine the potential effects of fasting and its associated hypoleptinemia with impaired allospecific and viral-specific immunities.

Citation:  
David, Emeraghi, Minghua Zhu, Braden C. Bennett, **Daniel K. Cheng**, et al. "Undernutrition and Hy-poleptinemia Modulate Alloimmunity and CMV-specific Viral Immunity in Transplantation." *Transplantation*, Mar. 2021. Pubmed, [doi:10.1097/TP.0000000000003743](https://doi.org/10.1097/TP.0000000000003743).

**Acute Kidney Transplant Rejection Predictor For All Age Groups** June 2018 - Mar. 2020  
Researched various genomic datasets among adult and pediatric patient blood data to determine 90-probe set signature with high correlation to acute kidney transplant rejection in all patients.

Citation:  
Shaw, Brian I., **Daniel K. Cheng**, et al. "An age-independent gene signature for monitoring acute rejection in kidney transplantation." *Theranostics*, vol. 10, no. 15, 2020, pp. 6977-86. Pubmed, [doi:10.7150/thno.42110](https://doi.org/10.7150/thno.42110).

## Awards

**7x International Piano Competition Winner**  
Performed at Carnegie Hall in New York City twice and at Wiener Musikverein in Vienna, Austria, the home of the Vienna Philharmonic orchestra and venue for the annual Vienna New Year's Concert.

**Google Science Fair State Award Winner** - Google  
Ranked #1 project in North Carolina for Google Science Fair.

**American Invitational Mathematics Examination (AIME) Qualifier** - Mathematical Association of America  
Qualified by ranking in the top 2.5% of scores nationally in the American Math Competition (AMC).

**Jane Street Estimathon 1st Place** - Jane Street Capital  
Competition revolving estimating various quantities

**Gold Medalist at National MathCON Math Competition** - MathCON  
Awarded gold medal nationally in 2019.

**National Semifinalist in College Fed Challenge** - Federal Reserve Board  
Researched and developed recommendations for the Federal Reserve about Monetary Policy in post COVID-19 world.

**National Semifinalist** - Modeling the Future Mathematics Challenge  
Top 10 overall nationally, researched and modeled insurance policies based on US agricultural data.

**Bronze Medalist at USA Mathematical Talent Search** - Art of Problem Solving Initiative  
One of the top scorers in national proof-based math competition.

## Industry Skills

**PROGRAMMING:** Python, HTML/CSS/JavaScript, Java, Solidity, Unix, SQL  
**PYTHON LIBRARIES:** pandas, NumPy, Matplotlib, Plotly  
**ANALYTICS:** Excel, R, Salesforce  
**OTHER:** LaTeX, Photoshop  
**LANGUAGES:** English, Chinese, German, Spanish