

# Lucas Wu

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## Education

University of Pennsylvania M&T | Interlake High School  
36 ACT | Computer Science and Finance Dual Degree

Expected Graduation – May 2025  
**GPA – 3.97/4.00**

## Work Experience

### *Oraclum Capital (2023-present)* / **Quantitative Analyst Intern**

- Currently building models to trade in excess supply/demand and price discovery markets
- Predicting movements of major indices based on economic factors (FOMC meetings, jobs, etc.)
- Studying development and resolution of fair value gaps and inefficiencies in stock markets

### *Bond Intelligence (2021-2022)* / **Software Engineer Intern**

- Developed live 3D plot.ly webpage visualizations, used docker to build functional cloud containers
- Utilized GCS, Google Cloud Run, Google Cloud SQL to maintain and migrate databases and sites
- Analyzed and created tearsheets on bond and stock data through the quantstats python library
- Constructed python dash-based multi-page dashboards with interactive graph and data functionality

### *MCJ Capital Partners (2022)* / **Qualitative Analyst Intern**

- Produced qualitative research reports on foreign small-cap companies and currency exchanges
- Created JS-based visualizations for professional display based on time-series data
- Aided mentor in publishing additional market research for outreach and exchange purposes

*Other: Freshman Trading and Technology Program @ Jane Street (2023), Data Analysis Intern @ Blur.live (2021)*

## Research Projects

### *Deep ReLU Network Efficiency Compared to Exponential-Width Shallow Networks (2023, ongoing)*

- Currently researching relative efficiency of deep ReLU networks on regular and nonregular functions on bounded intervals with Professor Surbhi Goel
- Also conducted investigations into performance of transformer architectures on large-number arithmetic

### *Deriving and Analyzing Markowitz Portfolio Optimizations in Real Markets (2021)*

- Derived linear algebraic formulae suitable for computer optimization using standard Markowitz Portfolio Theory for two stocks, extrapolated to larger numbers of securities through statistical methods

*Other: A Comparative Analysis of Hypothesis Testing Paradigms (2021)*

## Clubs and Extracurriculars

- Wharton Analytics Fellow January 2023-Present
  - WUFC Investment Team and Quant Team September 2022-Present
  - Wharton Investment and Trading Group Quant Committee September 2022-Present
- Interlake High School Student Co-President ▪ WAX Quant Team ▪ Penn Quant Trading Club Advanced Team

## Skills and Select Classes

- Extensive **Java** experience, **Python**, SQL, OCaml, C++, and **JavaScript** fluency, **React.js** experience
- Expertise in Excel, Power BI, several Google Cloud services, Docker, and GitHub
- Graduate-level Machine Learning, C++ Programming, Data Structures and Algorithms, Engineering Probability, Theory of Computation

## Awards and Honors

**USNCO High Honors** (US Chemistry top 50) ▪ **USAMO** ▪ **USABO** Semifinalist (US Biology top ~130)  
**BSA Eagle Scout** ▪ 2021 and 2022 WA State **FTC Robotics Champion Team**, **2022 top 12 Worldwide Perfect ACT Score** ▪ International Baccalaureate Bilingual Diploma in English and Chinese  
2022 InspirASIAN Scholar ▪ 2022 National Merit Finalist ▪ 2022 Elks MVS Semifinalist