

# Michael Goldfarb

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## EDUCATION

### Lehigh University

*Bachelor of Science with Honors, Computer Science & Business – GPA: (3.73/4)*

**Bethlehem, PA**

*May 2025*

- Relevant Coursework: Software Engineering, Database Systems, Programming & Data Structures, Business Statistics

## WORK EXPERIENCE

### [A.I.M.S Lab Mount Sinai Hospital](#)

*Machine Learning Intern*

**New York, NY**

*Jan. 2024 - Present*

- Engineered innovative models for multimodal data, linking genetic, clinical, and social factors in disease analysis
- Contributed to the deployment of advanced augmented intelligence models using deep learning, revolutionizing patient care
- Led transformative disease prediction initiatives, ensuring early interventions and overall improved patient outcomes

### Lehigh University STEM-SI

*Software Engineer Intern*

**Bethlehem, PA**

*June 2023 - Aug. 2023*

- Trained models based on historical data from the CDC to predict futuristic amounts of individuals infected with influenza
- Introduced parallel processing for enhanced model scalability, boosting runtime efficiency by 24% to optimize performance
- Created powerful data visualizations in Python to provide actionable insights into mitigating the spread of influenza

### Lehigh Blockchain

*Undergraduate Researcher*

**Bethlehem, PA**

*Aug. 2023 - Present*

- Create a pseudo verkle tree in Rust using the Marlin library and the ark\_works cryptographic libraries
- Assist in creating polynomial commitments, insertion into trie, and verify proof of membership and non-membership
- Simplified VerkleTrie proof, combining commitments, enabling uniform membership and non-membership proofs

### P.C. Rossin College of Engineering

*Undergraduate Teaching Assistant*

**Bethlehem, PA**

*Aug. 2023 - Dec. 2023*

- Hold weekly office hours, lead lab sections, and grade assignments for a 100+ student data structures course
- Expertise in debugging Java and Python, resolving students' issues with Git and Linux

## PERSONAL PROJECTS

### [MLB Game Predictor](#) | Python, Spring Boot, React JS, PostgreSQL

*Founder and Developer*

**New York, NY**

*May 2023 - Sept. 2023*

- Use machine learning to predict winner of MLB game; Scrape MLB Stats API to get stats from 2,430 past/current games
  - Achieve ~60% accuracy in predictions in June/July 2023
- Develop linear regression & random forest models to predict the winner; Clean & filter datasets using NumPy/Pandas

### [Mountain Hawk Food Finder](#) | Swift, Spring Boot, Python, Firebase

*Creator and Developer*

**New York, NY**

*June 2023 - Oct. 2023*

- Developed a visually-appealing full stack iOS app for Lehigh dining where users can easily navigate between dining options
- Implemented backend code to store user information, ratings (average + given) for each item, business hours, & daily menus

### [Solidity Semiswap](#) | Solidity

*Programmer*

**Bethlehem, PA**

*Nov. 2023 - Dec. 2023*

- Designed an ERC-20 to Ether Automatic Market Maker DEX in Solidity for my Blockchain Algorithms and Systems class
- The user can provide liquidity, estimate liquidity, withdraw liquidity, swap ERC to ETH, and swap ETH to ERC

## TECHNICAL SKILLS

**Languages:** Java, Python, Swift, HTML, CSS, JavaScript, SQL, Rust, C++

**Technologies:** React JS, Spring Boot, Postman, Pandas, PostgreSQL, OAuth, Bash, Firebase, Git, Linux

**Clubs:** Lehigh Coders Community (Professional Development Chair), Blockchain Club, AEPi (Treasurer)