Michael Goldfarb

Livingston, NJ | michaelgoldfarb6@gmail.com | +1 973-885-2675
linkedin | website | github

Education

Bachelor of Science with Honors, Computer Science & Business **Aug 2021 - May 2025**
Lehigh University – GPA: 3.70 *Bethlehem, PA*
Relevant Coursework Software Engineering, Database Systems, Programming & Data Structures, Systems Software

Skills

Languages Expert: Java, Python, HTML, CSS, JavaScript, SQL | Proficient: Swift, Rust, C++ | Familiar: Go, Solidity, C
Technologies React JS, Spring Boot, Postman, Pandas, NumPy, PostgreSQL, OAuth, Docker, Firebase, AWS, Git, Linux
Clubs Lehigh Coders Community (Professional Dev. Chair), Blockchain Club, AEPi (Treasurer, Academic Chair)

Experience

Oracle **Jan. 2024 - Present**
Software Engineer (Capstone) *Bethlehem, PA*
- Improve transaction speed by 25% for ECB digital euro by adjusting Oracle DB using PL/SQL, REST APIs, and VBCS.
- Lead database sharding implementation, enhancing scalability and performance by 40% for high-volume data.
- Conduct database stress and benchmark tests versus OpenCDBC; developing mobile wallet app & monitoring GUI.

A.I.M.S Lab Mount Sinai Hospital **Jan. 2024 - Present**
Machine Learning Intern *New York, NY*
- Engineer multimodal models linking genetic, clinical, and social data, boosting disease prediction accuracy by 20%.
- Deploy advanced augmented intelligence models, boosting patient outcomes by 15% using deep learning algorithms.
- Create generalized disease prediction initiatives, ensuring early interventions and overall improved patient outcomes.

Lehigh Blockchain **Aug. 2023 - Present**
Undergraduate Research Fellow *Bethlehem, PA*
- Developing a Stellar-like hierarchical consensus mechanism to model a global cross-CBDC payment solution.
- Created a pseudo `verkle` tree in Rust with Marlin and `ark_works` libraries, improving cryptographic efficiency by 25%.
- Improved proof verification success by 20% by creating polynomial commitments and trie insertion methods.

STEM-SI **May 2023 - Aug. 2023**
Software Engineer Intern *Bethlehem, PA*
- Trained models on historical CDC data, achieving 85% prediction accuracy in future influenza cases.
- Designed powerful data visualizations in Python to provide actionable insights into mitigating influenza spread.

Projects

OhConnections **Mar. 2024 - Present**
HTML, CSS, React JS *New York, NY*
Creator and Developer
- Create MLB version of New York Times' Connections, achieving over 1,000 active users within the first month of launch.
- Seamlessly integrated an intuitive user-friendly interface, enhancing user engagement with visual MLB player groupings.

MLB Game Predictor **May 2023 - Present**
Python, Pandas, NumPy, Spring Boot, React JS, PostgreSQL, AWS *New York, NY*
Creator and Developer
- Use machine learning to predict winner of MLB game; Scrape MLB Stats API to get stats from 2,430 past/current games.
- Develop linear regression & random forest models to predict the winner; Clean & filter datasets using NumPy/Pandas.

Solidity Semiswap **Nov. 2023 - Dec. 2023**
Solidity *Bethlehem, PA*
Programmer
- 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.

Mountain Hawk Food Finder **June 2023 - Oct. 2023**
Swift, Spring Boot, Python, Firebase *New York, NY*
Creator and Developer
- Developed a visually-appealing full stack iOS app for Lehigh dining, enabling easy navigation between dining options.
- Implemented backend code to store user information, item ratings (average/given), business hours, and daily menus.