Michael Fera

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EDUCATION

University of Minnesota Twin Cities   **Minneapolis, Minnesota**
Bachelor of Science in Computer Science   Expected Graduation, May 2026
- **Concentrations:** Intelligence and Software Engineering/Data Systems
- **GPA:** 3.85
- **Relevant Coursework:** Data Structures and Algorithms (Java), Software Engineering (Java), Artificial Intelligence (Python), Database Systems (SQL), Operating Systems (C), Machine Learning Fundamentals (Python), Web Development (JavaScript), Computer Graphics (TypeScript)

EXPERIENCE

Tropho   **Pittsburgh, Pennsylvania**
Software Engineer   Jun 2025 - Present
- Used **React Native and Expo** to develop a cross-platform mobile frontend, allowing users to find allergy-free restaurant menu items and improving accessibility for those with dietary restrictions
- Leveraged **Firebase Authentication, Firestore, and Storage** to build and manage scalable backend services, supporting user and restaurant accounts, and menu data as the platform expands
- Integrated third-party APIs including **Google Maps and Places Autocomplet**e for location services and fuzzy search with **Fuse.js**, enhancing user experience and enabling efficient restaurant discovery

University of Minnesota College of Science and Engineering   **Minneapolis, Minnesota**
Undergraduate Computer Science Teaching Assistant   Sep 2024 - May 2025
- Led weekly **Python programming labs** for over 100 students, providing guidance and troubleshooting to reinforce programming concepts
- Streamlined grading and provided **technical feedback** on homework and lab assignments for hundreds of students, accelerating their understanding of Python
- Created **instructional content and debugging exercises**, to clarify complex programming concepts, enhancing student engagement during labs and office hours

Upper St. Clair School District   **Pittsburgh, Pennsylvania**
District Custodian   Jun 2023 - Aug 2024
- Collaborated with a **30-member team** to clean and maintain **10 district facilities**, ensuring a safe and sanitary environment for students and staff
- Managed **cleaning schedules and task coordination** under strict time constraints, meeting daily and project-based deadlines efficiently
- Resolved unexpected maintenance challenges proactively, demonstrating **problem-solving and adaptability** to maintain consistent facility standards

PROJECTS

DBFL Discord Bot   **Pittsburgh, Pennsylvania**
Discord bot automating scheduling, stat tracking, and game management for a sports league   Apr 2025 - Jul 2025
- Built a **Discord bot using Node.js and Google Sheets API** to automate scheduling and stat track for a 30+ member sports league, reducing manual data entry
- Integrated **real-time data updates and user commands**, improving participant engagement and streamlining league operations through automated processes and game management

Visual Transit Simulator   **Minneapolis, Minnesota**
Simulation tool for bus and transit systems   Sep 2024 - Dec 2024
- Implemented **20+ features for a Java-based transit simulation tool**, implementing advanced software functionalities and maintaining code documentation and UML diagrams to improve usability and clarity for users
- Applied **design patterns (Singleton, Factory, Decorator, Observer)** and advanced testing with **JUnit and Mockito**, ensuring a modular, maintainable architecture and verified functionality for high-quality software delivery

Personal Portfolio   **Minneapolis, Minnesota**
Personal website to showcase information and projects for employers   Mar 2024 - May 2024
- Created a **multipage React website** featuring personal info, email contact form, and an interactive map, providing an engaging platform to highlight skills and projects
- Incorporated **GSAP animations and EmailJS** to enhance user experience with smooth transitions and enable direct communication, improving visitor interaction and accessibility

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C, Ocaml, HTML/CSS

Frameworks/Technologies: React, React Native, Node.js, Firebase, Google Cloud, Flask, SQL, Bootstrap,

Developer Tools: Git, GitHub, IntelliJ IDEA, VS Code, JUnit, Mockito

Concepts/Algorithms: A*, BFS, DFS, Alpha-Beta Pruning, Minimax, Heaps, AVL Trees, Graph Traversal, Design Patterns

HONORS AND AWARDS

Tau Beta Pi, Engineering Honor Society - University of Minnesota   **Nov 2025**
Dean's List (5 semesters)