SAMUEL BEREHE

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SKILLS

Python, C++, Java, JavaScript, C, SQL, HTML, CSS, React, Angular, .NET, AWS, Git, OAuth, Vim, SDLC, Machine Learning, Data Analysis.

EDUCATION

B.S. IN SOFTWARE ENGINEERING **Aug 2021 - May 2025**
Robert Morris University

EMPLOYMENT HISTORY

SOFTWARE ENGINEER INTERN **May 2024 - Sep 2024**
Sil4 Systems ***Pittsburgh, PA***

- Developed a real-time object detection system using Python to improve passenger counting accuracy in rail systems, aiming to replace outdated and unreliable sensor-based methods.
- Optimized YOLO deep learning models to handle fisheye lens distortion, improving detection accuracy in video feeds.
- Configured the Texas Instruments Jacinto 7 processor board to run Edge AI object detection successfully.

RESEARCH INTERN **Jun 2023 - Aug 2023**
The University of Massachusetts ***Amherst, MA***

- Analyzed global data center energy use and assessed industrial commitments to reduce carbon footprints, employing rigorous data analysis methods.
- Evaluated hourly energy data with Python to compare average versus marginal carbon accounting paradigms, ensuring precise and actionable insights.
- Developed strategies for comparing energy data across more than 60 regions, showcasing strong analytical skills and a commitment to robust research methodologies.

RESEARCH INTERN **May 2022 - Jul 2022**
The University of Tennessee ***Chattanooga, TN***

- Researched machine learning applications for radiation management in satellite technology.
- Explored radiation mitigating methods for satellites by implementing Python-based classification of radiation transients.
- Assisted in developing a transient detection system by applying thresholding techniques to classify signals, analyzing the impact of noise on signal accuracy, and optimizing satellite radiation data processing.

PROJECTS

SPOTIFY PLAYLIST ANALYZER
https://github.com/sebst269/Spotify-Analyzer

- Built a Python tool to analyze public Spotify playlists using OAuth, extracting track titles, artist names, and durations via the Spotify API.
- Automated export of playlist metadata to CSV, generation of summary reports, and visualization of top tracks with Matplotlib.
- Implemented flexible CLI options for data export, summary generation, and plotting, with organized output in a structured results folder.

CPP HEALTH TRACKER
https://github.com/sebst269/Cpp-Health-Tracker

- Developed a C++ application for tracking daily health habits (water intake, gym activity, blood pressure, and notes) using the SQLite C API for persistent data storage.
- Stored entries in a local SQLite database, enabling consistent logging and reverse-chronological data review.
- Added input validation and a menu-driven interface to ensure reliable user interaction and clean session flow.

LEADERSHIP

ASSOCIATION FOR COMPUTING MACHINERY
President

- Strengthen ACM's campus presence through events and workshops, fostering a strong, engaged community.
- Coordinate with professors and a team of officers to drive membership growth.
- Revamped the club by organizing and promoting a machine learning workshop.

RMU CLUB SOCCER TEAM
Athlete

- Compete in seasonal matches and weekly practices, contributing to overall team performance.
- Help organize and run youth soccer tournaments in partnership with Pittsburgh Riverhounds SC to support fundraising.
- Support club development by participating in team operations, outreach, and event planning.

AWARDS

NEXT CENTURY SCHOLARSHIP

- Full scholarship funded by Reed Hastings (founder and co-CEO of Netflix).