Max Eldabbas

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PROFESSIONAL SUMMARY

Results-driven software engineer with 3+ years of experience building data-driven systems and web interfaces in research and healthcare environments. Recently completed a Master's in Computer and Information Technology at the University of Pennsylvania. Proficient in Java, JavaScript, Python, C, SQL, HTML, and CSS with a focus on building scalable, accessible, and high-impact applications. Passionate about delivering elegant technical solutions to real-world problems that scale.

EDUCATION

University of Pennsylvania Philadelphia, PA

Master of Computer and Information Technology

* Computer Systems Programming
* Bioinformatics
* Data Structures & Software Design
* Algorithms & Computation
* Machine Learning
* Artificial Intelligence

The Pennsylvania State University State College, PA

Bachelor of Science, Biology

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL, C, R, HTML, CSS

Libraries & Tools: pandas, NumPy, Matplotlib, Docker, Git, AWS, PyCharm, IntelliJ, LaTeX

Frameworks: Node.js, basic React/Vue familiarity, N-tier architecture

Concepts: RESTful APIs, cloud storage basics

PROJECTS

Cell Line Scheduler | Python 2025

- Built a cross-platform PyQt6 desktop app that automatically generates 293T cell split rotations with a 48-hour cadence, Sun-Sat scheduling logic, fair role flipping after both groups complete a cycle, CSV/ICS export, and a modern UI.

Our Wave, Healing in Color Exhibit | HTML, CSS, JavaScript 2025

- Collaborated with *Our Wave* and *Phoenix Gender-based Violence Lab*, a Temple University research lab, to develop **Healing in Color**, an interactive virtual exhibit supporting LGBTQ+ survivors of harm–using JavaScript, CSS, and HTML.

Penn-Shredder | *C* 2024

- Designed and implemented a custom shell to manage process execution with runtime limits, incorporating a dual-stage pipeline and redirection functionality for efficient task processing.

OpenDataPhilly Data Analysis | *Java, CSV, JSON.simple* 2024

- Created a Java application to analyze a catalog of open data obtained from Philadelphia's OpenDataPhilly portal, including demographics statistics, authentic COVID-19 data, and real estate metrics.
- Built file parsers for CSV and JSON documents to clean raw data, addressing inconsistencies and missing values, improving the dependability of analytical results obtained through the program.

Laboratory Automation Program | *Java* 2024

- Developed a Java application for the University of Pennsylvania's Immunology team to optimize the processing of unstructured ordering data, leading to streamlined data collection, automated the generation of Word and Excel documents, and advanced calculations and analyses, enhancing the team's operational efficiency and accuracy by 50%.

Tweet Analyzer | *Java, N-tier architecture, Singleton Design* 2024

- Developed an application that analyzes large-scale Twitter data, identifying tweets that regard instances of influenza per state and determining their geographic origin based on the coordinates associated with each tweet.

EXPERIENCE

Technical Support Volunteer Feb 2025 – Present

Our Wave *Remote*

- Contributing cross-functionally with researchers and designers to build accessible, engaging web features that prioritize inclusion and trauma-informed design.
- Developing and implementing responsive, accessible front-end components using HTML, CSS, and JavaScript.

Lab Manager, Research Specialist May 2022 – Present

University of Pennsylvania *Philadelphia, PA*

- Lead a cross-functional team of 20 researchers to advance CAR T Cell therapy for autoimmune diseases, achieving a 20% improvement in research outcomes.
- Design and implement a Java application for the Human Immunology Core at the University of Pennsylvania, automating data parsing and analysis, streamlining the generation of sorted Excel sheets and Word documents, while also automating calculations for daily processing requirements and improving processing efficiency by 50%.
- Earned promotion to Lab Manager role for outstanding performance and organizational skills, demonstrated by improving lab efficiency by 30% and effectively analyzing research data.