

# Mark Mitri

Merrick, NY, 11566 • (516) 640-0800 • markmitri@pm.me • [linkedin.com/in/markmitri](https://www.linkedin.com/in/markmitri)

## EDUCATION

Lehigh University, Bethlehem, PA

August 2019 - May 2023

**Bachelor of Science in Computer Engineering**

GPA: 3.12

**Relevant Coursework:** Discrete Structures & Algorithms, Software Engineering, Operating System Design, Computer Architecture, Web Systems Programming, Systems Software, Introduction to Data Science

**Software skills:** (Familiar) JavaScript, HTML/CSS, Rust, Python, Java, C/C++, Arduino, RStudio

**Language proficiency:** English, Arabic (Intermediate)

## CERTIFICATIONS

**Data Analysis with Python**, freeCodeCamp.org

May 2024

- Extracted data from CSVs, utilized NumPy, Pandas, Matplotlib, and Seaborn for data processing and visualization.

**J.P. Morgan Software Engineering Virtual Experience on Forage**

June 2024

- Set up a local *Python* and *React* dev environment by downloading the necessary files, tools, and dependencies.
- Fixed broken files in the repository to make web application output correctly.
- Used JPMorgan Chase's Perspective library to generate a live graph displaying a data feed for traders to monitor.

## SOFTWARE PROJECTS

**Personal Website:** [mmitri.github.io](https://mmitri.github.io) (for additional information and projects)

**Data Analysis of Traffic Violations**, Lehigh University, CSE 160

December 2022

- Produced a statistical analysis using *R* of traffic stops in Maryland correlating car type and receiving a ticket.
- Sifted through **1.8M** data points, separating into **5** attributes, removing NA data, and unifying car names.
- Using the *e1071* library, created Naive Bayes, logistic regression, KNN, and decision tree models to highlight the potential correlation, with a max recall of **70%**, precision of **70%**, and accuracy of **65%**.

**Social Media App Development**, Lehigh University, CSE 216

August 2022 - December 2022

- Developed a Social Media App with a team of five using Agile methodologies, rotating roles, and **2-week** sprints.
- Coded the cloud-based front end with *JavaScript*, *HTML/CSS*, and *React*, utilizing *Maven* for build and execution.
- Implemented Google's OAuth, REST API & CRUD resource management, and a backend server hosted on Heroku.

**AsaLang Programming Language Built on Rust**, Lehigh University, CSE 262

January 2023 - May 2023

- Developed a lexer in *Rust* using *nom* library for tokenization and pattern recognition for **11** categories of ASCII characters.
- Constructed a grammar and parser to translate tokens into ASTs to write and call functions, do math, and return values.
- Implemented an interpreter enabling code execution using a Value enum and Runtime struct to manage variable bindings and function definitions.

**Word Search Game**, Lehigh University, CSE 264

May 2023

- Developed the client-side web application for a multi-player word search game using *JavaScript* and *HTML*.
- Integrated *socket.io* library for client-server communication between **6** commands.

**Ultimate Tic-Tac-Toe**, Lehigh University, CSE 264

May 2023

- Coded a local two-player web game using *JavaScript* and *HTML* called Ultimate Tic-Tac-Toe, played on a larger 9x9 grid.
- Updated a table to reference the **32** win conditions and used *querySelector*s to change the board.

## SELECTED EXPERIENCE

**IT Consultant Work Study**, Lehigh Technology Service, Bethlehem, PA

September 2019 - May 2023

- Diagnosed hardware and software issues across Windows, macOS, and Linux systems, supporting faculty and **300+** students.
- Executed extensive data backups/transfers, driver updates, registry fixes, BIOS changes, and OS installations, ensuring comprehensive technical support for repairs and efficient issue resolution.
- Utilized Jira to create tickets for tracking and documentation of the progress.

**Senior Capstone Project: Electronic Signal Visualizer**, Lehigh University

August 2022 - May 2023

- Created a mechanical system that produces a Fourier transform visualization from 3 stepper motors.
- Wrote a **22-page** technical report, outlining design requirements, sensor specifications, and total costs.
- Utilized oscilloscopes, multi-meters, troubleshooting sensors and motors, and soldering to test functionality.

**Enterprise Resource Technical Lead Internship**, RR-Racing, Exton, PA

July 2020 - August 2020

- Successfully transitioned from Quickbooks to xTuple enterprise resource software.
- Directed data cleanup and migration of **1000+** items, customers, and vendors into spreadsheets.
- Developed CSV atlases to merge complex customer data, mapping **20+** data points for a flawless replacement.

*Team Lead - Aerodynamics subsystem*

- Orchestrated a high-performing team of 4 in planning and producing 3 groundbreaking aerodynamic projects.
- Manufactured the team's **1<sup>st</sup>** carbon composite aerodynamics kit with **15** elements, generating **155** lbs of downforce.

*Designer - Aerodynamics subsystem*

- Designed and manufactured carbon composite nosecone and sidepod, reducing the frontal area and weight by **25%**.
- Conducted comparative analysis of **5** undertray profiles, validating a downforce of **50** lbs.
- Organized an **18**-page technical document about aerodynamics and vehicle properties for seamless knowledge transfer.

*Member - Chassis & Suspension Team*

- Re-modeled and manufactured **10** chassis jigs using SOLIDWORKS, improving production time by **15%**.
- Collaborated with a team to fabricate **4** carbon composite A-arms, achieving a **50%** weight reduction.

*Accomplishments*

- Ranked **6/100** in business presentation, **27/99** in design event, and **2/100** in weight.
- Ranked **7/100** in business presentation, **16/111** in cost event, and **2/121** in weight.