# MICHAEL ROSTOM

#### Education

## **Brown University**

Sc.B in Computer Science

**Relevant Coursework:** Operating Systems, Foundations of AI, Software Security & Exploitation, and Real-time + Embedded Software, Logic for Systems.

Hobbies and Interests: Reading, Playing badminton, Caring for plants, Going on walks, Solving puzzles

## Projects

## Game Console | Arduino - C++ - PlatformIO

- Collaborated within a 3-person team to design and build a handheld game console featuring two original games, utilizing joystick and button controls, as part of an Embedded Software course.
- Developed embedded software using Arduino and PlatformIO, implementing efficient graphics rendering techniques on an LCD screen, achieving smooth gameplay at 75 FPS.
- Led game software development efforts, focusing on input handling, real-time physics calculations, structured code architecture, and comprehensive testing strategies including unit and system tests. Actively employed pair programming throughout development, ensuring code quality, knowledge sharing, and rapid iteration cycles.

## Infinite Word Search Website | React - Java - TypeScript - API

- Collaborated on a 3-person project to create an Infinite Word Search Website for word search enthusiasts as part of an Intro to Software Engineering course.
- Developed a dynamic platform that generates unlimited word search puzzles and features a shareable, daily-refreshing puzzle for social media.
- Led front-end development, focusing on UI design and creating an engaging, interactive puzzle experience for users. With a priority on user-friendly design principles to enhance accessibility and enjoyment.

#### Maze Generator & Solver | C - Drunken Walk - DFS

- Developed a maze generator and solver program in C as part of an Introduction to Computer Systems course project.
- Implemented the drunken-walk algorithm to randomly generate unique mazes of varying sizes.
- Created an efficient maze-solving algorithm using Depth First Search (DFS) to find a path from start to finish.
- Gained hands-on experience with data structures and algorithmic problem-solving in C.

## City Path Planner | Java - Dijkstra - REPL - CSV parsing

- Collaborated on a 2-person project to design and implement a city path planning tool in Java for Program Design with Data Structures & Algorithms course.
- Implemented Dijkstra's algorithm to calculate the shortest route between cities based on variable weights: time, distance, or cost.
- Created a CSV parser to load city data and weights dynamically, enabling flexibility and scalability of input data.
- Strengthened skills in algorithm design, data structure implementation, and user interaction in Java.

## EXPERIENCE

# Office Assistant

Brown University - Residential Life

- Provided great customer service to students, and staff, assisting with room key and key card issues.
- Handled inquiries via phone, email, and in-person interactions, addressing questions and concerns about Residential Life policies, housing, and access.
- Collaborated with a diverse team of staff and student workers to resolve issues efficiently.

## TECHNICAL SKILLS

Languages: Python, Java, C, x86 Assembly, JavaScript, TypeScript, C++, C#, Racket, ReasonMl Frameworks: React, TensorFlow, PyTorch

Developer Tools/Applications: Visual Studio Code, Intellij, Git, PyCharm, Terminal, GDB, Unity, VIM, Jupyter notebook

Libraries: Matplotlib, Numpy, Pandas

# March 2023

Jan 2023 – Sep 2024

Providence, RI

September 2023

November 2024

Aug 2022-May 2026 and Real-time +

Providence, RI

April 2024