Thomas Bird

415-728-7784 | birdt@rpi.edu | linkedin.com/in/tommycbird | github.com/tommycbird

Education

Rensselaer Polytechnic Institute — Troy, NY
B.S. in Computer Science; 3.2 GPA; Leadership Scholarship; Dean's List — *Aug. 2021 – May 2025*

Experience

Software Engineer Intern — June 2023 – August 2023
Route4Me — *Tampa, FL*

- Developed, updated, and executed test scripts for Route4Me's Python SDK, enhancing software quality by identifying and debugging HTTP errors and conducting thorough JSON request testing.
- Constructed a robust web scraper leveraging Python, Selenium, BeautifulSoup, Pandas, and Requests, automating and enhancing data collection processes.

React Developer — May 2023 – Present
Aixus Health — *Albany, NY*

- Spearheaded the development of a patient-focused application for Aixus Health utilizing React Native, creating an intuitive and user-friendly interface linked Supabase.

Projects

Path Pilot | *SwiftUI, Mapbox, Firebase, Git* — November 2022 – Present

- Led development on an iOS application programmed in Swift with Swift UI, integrated location features with Mapbox's mapping SDK, and connected online features to an updating database via Firebase.

RLOTMG | *Unity, C#, ML-Agents, Python, TensorFlow* — April 2023

- Trained multiple agents using machine learning techniques in a Unity game, inspired by 'Realm of the Mad God'.
- Employed TensorFlow for data visualization and tracking of algorithm performance throughout the training process in order to author a research paper on the project, effectively summarizing the procedures, results, and insights derived from the work.

C Compiler | *C, Assembly* — March 2022

- Developed a compiler in C that processes and converts basic C code to working MIPS instructions for Assembly.
- Programmed capabilities for basic math instructions (+, -, *, /), looping, and functions.

Birdev | *HTML, CSS, JavaScript* — March 2022 – Present

- Programmed and stylized my personal web-page with HTML, CSS, and JavaScript viewable at "birdev.net."

Carcassone Solver | *C++* — October 2021

- Developed a C++ program utilizing recursion to effectively and efficiently solve complex Carcassone puzzles.

Dragon Age Pathfinder | *Unity* — March 2023

- Converted map data from the game "Dragon Age" into Unity2D, then applied A* path-finding on programmatically placed way-points to generate feasible and efficient routes between location sets.

Astromath | *HTML, CSS, Javascript, Node.js* — November 2021

- Developed a space-themed math web-game for a Hackathon within a 24-hour constraint capable of problem difficulty ranging from basic algebra to Calculus 2 with randomly generated integral problems.

Technical Skills

Languages: C, C++, C#, Python, Java, Swift, Assembly, JavaScript, HTML, CSS, SQL, LaTeX, Dafny
Frameworks: Git, React, Unity, Node.js, JUnit, Valgrind, GCP, Firebase, Supabase, VS Code, Visual Studio, Eclipse
Libraries: Pandas, TensorFlow, ML-Agents, Bootstrap, Selenium, BeautifulSoup, Requests
Relevant Coursework: Data Structures, Algorithms, Computer Organizations, Principles of Software, Intro to Artificial Intelligence; Discrete Math, Modern Binary Exploitation, Computational Geometry, Game AI, Database Systems, Software Design and Documentation, Multi- variable Calculus, Differential Equations