PAYTON FALCONE

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EDUCATION

Wentworth Institute of Technology   Boston, MA
Bachelor of Science in Computer Science | GPA: 3.9   *August 2024*

TECHNICAL SKILLS

Languages: Java | Python | C# | C++ | JavaScript | SQL | HTML/CSS

Frameworks/Technologies: Unity | Unreal Engine | Git/Github | Windows Server 2012

Relevant Coursework: Data Structures | Algorithms | Databases | Network Programming | Network Admin | Data Science | Operating Systems | Parallel Computing | Software Engineering

PROJECTS

ROMS — Open Source | *Restaurant Management System*   *02/2024 - 04/2024*
- Collaborated with ~10 contributors on an open source, container-less application supported on MAC OS & Windows
- Compiled with ElectronJS, data-managed with SQLite, now in use at family restaurant with over 150 daily customers
- Trained 16 employees with Unity-based simulation where employees manage tasks & aim to maximize daily revenue
- Leveraged PlotlyJS to pinpoint & counteract low-sale areas across the restaurant, increasing weekly revenue by ~$750

Fantasy League | *Auction House*   *05/2023 - Present*
- Created a low-latency Typescript-based auction house, integrating RabbitMQ for pub/sub & Redis cache for bidding
- Leveraged Postgres as a data store, supporting throughputs of 250+ bids/second, via WebSockets for real-time updates
- Utilized Python to analyze RiotAPI data for ~900k players to train a neural network for player scores & card ranking
- Developed 32ms latency backend with Express, Node.js, & GCP GKE, ensuring scalability & availability for 300+ users

Lite Souls | *Game Engine and Action RPG*   *07/2024 - Present*
- Created a custom game engine using Raylib to develop an action RPG in a group of two
- Implemented enemy NPC AI with advanced behaviors including patrolling and pathfinding
- Designed a custom-built physics engine that handled collision and ray cast-based detection for enemies

Mayor Simulator | *City Building Simulation*   *07/2024 - 08/2024*
- Developed city building simulation with 5 different categories of buildings covering 15+ individual buildings, each consisting of unique impact on city metrics
- Incorporated a unique foldable UI, increasing user experience and reducing screen clutter by 40%
- Integrated SQLite for three separate save files, allowing a user to seamlessly switch between completely different city designs
- Implemented 8 different dynamic city metrics, updating in real time using advanced calculations, taking into account factors such as diminishing returns

EXPERIENCE

Cranston Public Schools   08/2024 – Present
Computer Science Teacher   *Cranston, RI*
- Delivered advanced computer science lessons on programming fundamentals, Data Structures and Algorithms to 500+ students
- Provided constructive feedback for 300+ AP computer science students, helping them develop critical debugging and problem-solving skills
- Adapted quickly to different classroom environments and grade levels, managing classroom dynamics and addressing diverse learning needs

Soulful Language   01/2023 – 04/2023
Web Developer Intern   *Cranston, RI*
- Collaborated with the company to develop multiple prototype websites to display their brand including a prototype that used JavaScript and Passport to create a mock login section
- Designed and deployed a final website to dozens of clients
- Completed maintenance on the website, constantly making improvements

AWARDS & LEADERSHIP

Volunteer - JuniorAchievement — Developed small projects in C# and Unity, showcased to hundreds of students in exhibit-life fashion