Saad Ahmad Usmani

672-667-0450 | Email | LinkedIn | Portfolio Site | GitHub

Technical Skills

Languages: Java, JavaScript, TypeScript, Python, C#, C/C++, SQL (SQLite), , HTML/CSS, R, Swift
Frameworks: React, Node.js, Flask, Express.js, FastAPI
Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib

Experience

Research Assistant / UI Designer **Jan 2024 – April 2024**
SFU Sports Analytics Group *Burnaby, BC*

- Engaged in extensive literature review, with the collection, categorising and summarizing of research journal articles involving trust and investor confidence.
- Designed and implemented the new website for the SFU Sports Analytics Group, using the AEM web managaer, and leveraging my front-end development skills, before deploying the site

Head of Combat Systems / Backend Developer **Nov 2024 – Present**
Horizon Expedition *Burnaby, BC |Remote*

- Developed the combat system mechanics, using C# scripting for Unity, for a multiplayer-online extraction shooter called Kingdom, that is a work in progress
- Contributed 400+ lines of code to an established codebase via Git
- Leveraged game-dev and backend technologies experience to deliver a synchronized combat system to players in real time

Tutor for DSA Course and Intro to Computer Systems Course **Jan 2025 – Present**
SFU Peer Tutor Program *Burnaby, BC*

- Taught concepts such as memory management, multi-level caches, RISC-V ISA, pipelining, among various others for CMPT 295 — Introduction to Computer Systems Course
- Taught concepts such as implementations of various data structures ,object-oriented programming, time and space efficiency, among various others for CMPT 225 — Data Structures and Algorithms Course
- Harnessed previous experience and knowledge from the courses to mentor undergraduate tutees on concepts as well as expressively use code, in addition with debugging and optimizing code.

Projects & Technical Activities

AutoBoat | *Project for RIT University Machine Learning Competition — Dubai, UAE* **Nov 2022**

- Developed the C code for a autonomous boat, detecting obstacles through a Arduino-built frame, altering its course to traverse the path in the shortest time possible. Team's boat achieved 3rd fastest race time

Z-Bikes | *Project for Murdoch University Annual Hackathon— Dubai, UAE* **Jan 2023**

- Developed an user interface for a bike-sharing mobile application that rewards users based on distance traveled, incentivizating fitness and a Eco-friendly manner of transport. Invited on-site for final, placed 4th nationally

ESFL | *Project for Compass Hackathon —Abu Dhabi, UAE* **June 2024**

- Developed an NFT marketplace of E-Sports collectibles attached to an E-Sports Fantasy League application, to enhance the Compass (gaming organization) ecosystem. Integrated Web3 Components, such as NFT minting using Cartesi framework

HeatSpace | *Project for JourneyHacks Hackathon — Burnaby, BC* **Feb 2025**

- Developed a smart heat optimization system that simulates heat propagation to determine optimal heater placement in rooms. Leveraged conversion of 3D USDZ model to 2D floor plans.
- Employed React.js and Tailwind CSS for dynamic frontend, and Flask integrated with OpenCV and NumPy for backend, , using Gaussian Decay Model and k-D Tree search algorithm for optimizing heater placement

Education

Simon Fraser University **Aug. 2023 – May 2027**
Bachelor's in Computing Science, Minor in Statistics — CGPA : 3.80 *Burnaby, BC*

Cambridge International School Dubai **Sept. 2019 – June 2023**
A Level Certification — 3A in Math, Computing Science, Chemistry, A in Physics* *Dubai, UAE*