MOHAMMAD SAAD

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EDUCATION

Carleton University – Expected Graduation 2027   *GPA: 11.0/12*   Ottawa, ON
B. A. Honours Computer Science   Sept. 2023 – Present

Coursework: Systems Programming, Discrete Structures, Abstract Data Types and Algorithms, Linear Algebra II

WORK EXPERIENCE

Department of National Defence VCDS   Jan. 2025 – Present
Junior Data Analyst

- **Increased** data accuracy and strategic insights by **managing and analyzing large datasets**, leading to faster decision-making across the VCDS branch.
- **Reduced reporting time by 40%** by designing and developing interactive **dashboards in Power BI**, improving accessibility for key stakeholders.
- **Boosted efficiency by 30%** by **automating data workflows and reporting processes in Python**, minimizing manual work.
- **Enhanced database performance** by **optimizing data extraction, transformation, and analysis**, ensuring seamless integration and faster query execution.

Crispys Resto Grill   Aug. 2020 – Jan. 2025
Crew Supervisor

- Led a team of 8-10 employees, ensuring seamless operations and high customer satisfaction.
- Introduced innovative workflow systems, enhancing overall restaurant **efficiency** and **speed**.

PROJECTS

UFC Predictor App (PyTorch, Flask, SQLite, NodeJs)

- Developed a web-based application with PyTorch for AI-driven predictions of UFC fight outcomes based on fighter stats and historical data.
  - Designed and trained a neural network to calculate win probabilities using PyTorch.
  - Implemented a **RESTful API** with **Flask** to serve predictions and handle user inputs.
  - Integrated **SQLite** for storing and querying fighter stats and match history, ensuring efficient data retrieval.

Dealer Connect - EV Charger Booking App (Flutter & Firebase)

- Designed and implemented an IOS app using the Flutter SDK and Google Firebase with features including:
  - Dynamic booking system with **CRUD** (Create, Read, Update, Delete) operations for EV charger reservations
  - Real-time data synchronization for booking updates and availability status
  - Secure user authentication and role-based access control

Multithreaded Simulation Game with Dynamic Memory Management (C in a Linux Environment)

- Designed and implemented a multithreaded C program within a Linux ubuntu VM simulating a hunting environment, enabling multiple hunters to operate independently and efficiently by using:
  - Pthreads to create separate threads for each hunter, allowing concurrent execution and improving simulation realism.
  - Pointers to manage data structures, enabling fast and space efficient manipulation to access hunter and artifact details in shared memory.
  - Semaphore synchronization to prevent race conditions and deadlocks, ensuring data integrity across threads.

Peer-to-Peer Networking System (Python)

- Collaborated with a team of developers to design and implement a P2P **client-server application** where 4 nodes function as both clients and servers, utilizing **TCP/IP,** socket, and threading libraries.
- Optimized the system for seamless real-time communication and data exchange between nodes, ensuring efficient concurrency and robust error handling.

TECHNICAL SKILLS

Languages	Python, Rust, Kotlin, C/C++, Golang, TypeScript, Tailwind CSS
Development Tools	MySQL, PowerBI, Linux, Docker, Valgrind, Git/GitHub
Cloud and DevOps Tools	AWS (EC2, S3, Lambda, RDS, CloudWatch), Azure, Jenkins, Kubernetes
Frameworks & Libraries	React, Flask, Django, Spring Boot, PyTorch, NumPy, pandas, scikit-learn