Mohamed Jama

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Technical Skills

Languages: Python, C, C++, Java, SQL, JavaScript, TypeScript, HTML, CSS
Frameworks: React, Node.js, Flask, Next.js Material-UI, FastAPI
Developer Tools: Git, Docker, Microsoft Azure, VS Code, Unity, Jupyter Notebooks
Libraries: PyTorch, sci-kit learn, Keras, Pandas, NumPy, Matplotlib, OpenGL

Experience

Security Professional June 2022 – Present
Allied Universal Services - TD Bank *Toronto, ON*

- Secured 64,882 m^2 across 2 multi-story corporate buildings, protecting approximately 1,500 employees and company assets.
- Conducted routine interior and exterior patrols; monitored CCTV, alarm systems, and electronic access control to detect and mitigate security risks.
- Managed access control and visitor management, verifying credentials, issuing badges, and preventing unauthorized entry.
- Responded to incidents, medical emergencies, alarms, and disturbances; coordinated with law enforcement and emergency responders when required.
- Prepared detailed incident reports and daily activity logs while enforcing corporate safety policies, risk management procedures, and compliance standards.

Projects

Brain Tumor Segmentation & Classification | *Python, PyTorch, NumPy, U-Net*

- Engineered a hybrid deep learning pipeline for automated brain tumor detection and classification using 3,064 MRI scans.
- Developed a U-Net segmentation model with a single-channel ResNet-50 encoder, achieving a 0.75 test Dice score.
- Fine-tuned a ResNet-50 model to classify tumors with 96% test accuracy.
- Accelerated PyTorch training on NVIDIA A100 GPUs, optimizing with binary cross-entropy, Dice loss, and AdamW.

6809 Microprocessor Emulator | *C++, Assembly, Makefile, Git*

- Architected a cycle-accurate Motorola 6809 CPU emulator in C++, implementing the full ISA to execute legacy assembly.
- Engineered a fetch-decode-execute pipeline, managing CPU registers and memory addressing modes for strict hardware fidelity.
- Implemented stack operations and interrupt handling, achieving 100% logical correctness against standard test suites.
- Optimized memory mapping and instruction parsing to ensure high-performance execution of complex codebases.

OpenGL Game Engine | *C++, OpenGL, GLSL, GLFW*

- Developed a 3D graphics engine in C++ and OpenGL (Core Profile) to render complex textured models in real-time.
- Programmed GLSL vertex and fragment shaders to implement the Phong reflection model, specular highlights and texture mapping.
- Integrated Model-View-Projection matrices to compute 3D spatial mathematics for camera movement and scaling.
- Optimized rendering performance using VBOs and VAOs, reducing CPU-to-GPU memory overhead for smoother frame rates.

Education

Toronto Metropolitan University Toronto, ON
Honours Bachelor of Science in Computer Science *June 2027*