Mohamed Eltaib

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Education

Toronto Metropolitan University   Expected: April 2026
Specialized Honours Bachelor of Science in Computer Science   *Toronto, Ontario*
- **Relevant Courses:** Data Structures and Algorithms, Operating Systems, Discrete Structures, Software Engineering, Computer Science (Python and Java), Computer Organization, C and UNIX, Database Systems, Artificial Intelligence
- **Activities:** TMU Aero Design, TMU MetRocketry Club, Terra Hacks, Riipen (LevelUP Program)

Experience

Toronto Met Aero Design   Sept. 2024 - Present
Researcher and Developer
- Implemented computer vision with **OpenCV** and **YOLOv8** for real-time target tracking on moving aircraft
- Integrated vision systems with onboard sensors and **Raspberry Pi**, ensuring compatibility in dynamic environments
- Tested and calibrated with **MATLAB** to fine-tune system performance for flight simulations

MetRocketry   Oct. 2024 - Present
Avionics Software Engineer
- Developed real-time rocket tracking and monitoring software using **Python** and **PyQt**, enabling accurate visualization of rocket location for efficient recovery
- Integrated sensor data for reliable telemetry analysis, ensuring accurate tracking under various conditions
- Applied physics and aerodynamic principles to design software systems that enhance safety and recovery accuracy
- Collaborated with a cross-functional engineering team to test and optimize software performance, contributing to successful flight missions

Software Engineer Intern   Jan 2024 - Apr. 2024
Ada Analytics
- Led full-stack development for a finance analytics platform using **React.js** and **Django**
- Managed frontend team for code quality and feature development using **Git**
- Developed APIs with **Django REST Framework** for processing complex financial data
- Integrated interactive data visualizations with **Plotly** to enhance user engagement

Game Designer   Apr. 2022 - Jan. 2024
Gamefam Studios
- Modeled 3D assets using **Blender** and **Maya** for game environments and characters
- Created high-quality textures in **Substance Painter** to enhance realism
- Developed **C** scripts for game functionality, including movement and AI behavior
- Collaborated in Agile sprints using **Trello** to manage tasks and deadlines

Projects

DryEye AI | *React, Django, Python, OpenCV, YOLOv8, NASA API*
- Developed AI tool predicting droughts by combining historical data with **YOLOv8**-based drought detection
- Built responsive **React** frontend and **Django** backend for seamless data flow
- Used **OpenCV** to preprocess images, improving drought region identification accuracy
- Generated climate reports to aid farmers and governments in early preparedness

QuickFix | *HTML/CSS, Python (Flask), SQL, Matplotlib*
- Built bug tracking system with **Flask** for real-time team reporting
- Implemented secure user authentication using **Scrypt**
- Created dashboards with **Matplotlib** for tracking bug trends and metrics
- Designed scalable **SQL** database to manage bug and user data

Technical Skills

Languages: Python, Java, JavaScript, C/C#, Bash, HTML/CSS, SQL, Elixir, Haskell, Rust
Libraries/Frameworks: OpenCV, YOLOv8, React.js, AWS, Flask, Bootstrap, Git, Django, Next.js, FastAPI, REST
Tools: VS/VS Code, MS Office, Linux/Unix, Eclipse, SQL Developer, Blender, PyCharm, MATLAB, Raspberry Pi