Mohammed Maaz Dossa

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Education

Georgia Institute of Technology – Honors Program *August 2021 –May 2028*

- Bachelors & Masters of Science in Aerospace Engineering (Control and Optimization), Minor in Computer Science
- GPA 3.7/4.0 – Dean's List, Faculty Honors
- Selected for Aviation Week Network's **20 Twenties Class of 2026,** recognizing **top 20 aerospace students worldwide**
- **Relevant Coursework:** Machine Learning, Artificial Intelligence, DSA & OOP, Thermodynamics, Optimization

Experience

Machine Learning & Autonomy Engineering – UnfoldAI *Mar 2026 – Present*

- Architecting deep unfolded neural networks for safety critical AI applications. 30x improvements in convergence time.

Millennium Management Quant Development Invitational *Apr 2026*

Founding Engineer & Forward Deployed Engineering Lead – Endeavor Elements *July 2024 – July 2025*

- Spearheaded Endeavor Elements $750,000 seed raise at a $7.5 million post money valuation led by Unshackled VC
- Built real-time turbulence suppression control with Doppler LiDAR + MPC in Python/C++/Rust; <100 ms latency
- Developed AI agent-based regulatory automation system (*ConformIQ*) using a custom RAG stack + vector DB
- Fine-tuned internal LLMs and optimized retrieval pipelines using real MRO data; reduced planning labor by 50–70%
- Developed plant and sensor models in MATLAB/Simulink to inform control architecture and stability margins

Software Engineer – Medisyd Corporation *Aug 2025 – Jan 2026*

- Architected a scalable backend decision engine (Python, FastAPI, SQLAlchemy) that ingests patient telemetry and evaluates configurable policies to compute deterministic triage scores across clinical cohorts
- Built a modular full-stack service architecture including a physician-client chat interface, rule evaluation engine, signal processing pipeline, and AI inference service enabling clinician-in-the-loop workflows
- Automated patient triage and monitoring, reducing manual review time by ~60% (2x patients seen per week)

Machine Learning & Computer Vision Lead – Low Gravity Science & Technology Lab *Aug 2025 – Mar 2026*

- Built CLIP-style vision-language model aligning hyperspectral/RGB with semantic labels; plant health tagging
- Fused VLM embeddings with CNN/U-Net for region-grounded predictions with calibrated probabilities
- Designed hybrid supervised + unsupervised pipeline with active learning (K-means, autoencoders, uncertainty sampling) to cut labeling needs and improve domain-shift robustness for computer vision applications
- Reached 75–80% accuracy across crops and lighting with stratified evaluation and reproducible data/metrics
- Optimized for edge and scale with quantization, pruning, input tiling, and multi-GPU PyTorch training

Autonomy, ML & Controls Research – Autonomous Control and Decision Systems Laboratory *July 2025 – Present*

- Designed a custom autonomy stack for an eVTOL platform to validate advanced flight control algorithms.
- Developed MPC, MPPI, and LQR controllers for autonomous takeoff, navigation, and precision landing.
- Built reinforcement learning-based controllers using MPPI variants; applied trajectory optimization under uncertainty

Robotics Engineer – Laboratory for Intelligent Decision & Autonomous Robots *Aug 2025 - Present*

- Developed a hybrid RL-MPC framework for robust bipedal locomotion inspired by the MIT Cheetah architecture.
- Implemented an RL-based high-level policy that learns strategic decision-making in complex environments, integrated with a low-level MPC controller for precise joint-level trajectory tracking and stability enforcement
- Researched robust, terrain-adaptive locomotion by extending PyTorch-based control pipelines in Sim2Real contexts
- Developed and tested motor control algorithms; supporting hardware integration and system-level debugging

Boeing Fleet Structures Engineering – Delta TechOps *Spring & Fall 2024*

- Led and scoped the 737 Chemical Milling Project, creating a full project charter, coordinating with Boeing engineers
- Drafted engineering authorizations (ER/As) for major structural repairs across the Boeing 737, 757 and 767 family

Thermal Engineer – NASA L'Space Mission Concept Academy *Jan 2023 – May 2023*

- Collaborated with NASA engineers to design a mission-related team project focused on the Mars Polar Tracer Mission
- Developed a robotic mission concept to be deployed at a chosen landing site on Mars that met strict design constraints
- Ensured heat transfer optimization and the rover's capability to withstand the unpredictable Martian climate

Leadership

Team Lead Representing GT – Anduril AI Grand Prix *Feb 2026 - Present*

- Led an 8-person MS/PhD team developing Georgia Tech's autonomous drone racing stack for Anduril AI Grand Prix.
- Designed the perception, VIO, planning, and nonlinear control architecture for autonomous racing.
- Achieved **13s** course time and placed **3rd among 3,000+** teams in virtual qualifiers, advancing to physical qualifiers

Propulsion Lead & Founding Member – GT Supersonics Club (GTSC) *May 2023 – May 2025*

- Founded GTSC and led propulsion for a record-breaking supersonic RC aircraft program
- Directed testing and performance validation of gas turbine engines; built scalable workflows for future integrations

Technical Skills: Python, C++, Java, RUST, React, Linux, TensorFlow, PyTorch, SQL, CUDA, Optimal Control, MATLAB