Hamoud Alshammari

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Portfolio | LinkedIn | GitHub

OBJECTIVE

PhD applicant with a strong foundation in aerospace engineering and experience in research spanning orbit dynamics, satellite systems, and data-driven methods. Eager to apply analytical skills to advance academic and applied research.

EDUCATION

University of Texas at Austin, Cockrell School of Engineering — Austin, TX, USA
M.S.E. in Aerospace Engineering — *Jan 2023 – Dec 2024*
GPA: 3.9/4.0

Relevant Coursework: Method of Orbit Determination, Satellite Control Systems, Satellite Geodesy, 3D Remote Sensing, Synthetic Aperture Radar, Low Earth Orbit for Earth Observation

University of Wisconsin – Madison, College of Engineering — Madison, WI, USA
B.S. in Engineering Mechanics with Aerospace Engineering Focus — *Jan 2018 – Dec 2020*

RESEARCH & PROFESSIONAL EXPERIENCE

Neo Space Group — Riyadh, KSA
Aerospace Technology Engineer — *May 2025 – Present*

- Conduct R&D and perform technical due diligence across SatCom, PNT, EO, and NB-IoT; validate vendor claims with rigorous quantitative analyses and PoCs.
- Build detailed link budgets, coverage/capacity models, and mission-level trades; verify antenna/SDR specifications against demanding system requirements.
- Run CEO/CTO-level briefings with prospective partners to evaluate technical fit, align integration plans, and define PoC scope, milestones, and success metrics.

University of Texas at Austin, Center for Space Research — Austin, TX, USA
Research Engineering/Scientist Professional — *Jan – April 2025*
Graduate Research Assistant — *Feb – Dec 2024*

- Advanced lunar geodesy and reference frame research, applying geodetic principles to evaluate and integrate multi-source spatial datasets.
- Leveraged NASA's public datasets and terminal tools for data access and communication with agency systems.
- Conducted literature reviews and co-authored internal technical documentation supporting interagency lunar reference-frame alignment.

Selected Project – Remote Sensing Tree Detection (UT Austin) — *Feb – May 2024*

- Applied convolutional neural networks to detect/count trees in satellite and LiDAR datasets.
- Benchmarked ML accuracy against classical methods, demonstrating robust spatial performance.

LEADERSHIP & VOLUNTEERING

Bold Beginnings Leadership Program — Menomonie, WI, USA
Participant and Awarded Leader — *Jan – May 2016*

- Collaborated closely with peers to address key campus diversity issues; formally recognized with a leadership certificate at the Annual Awards Ceremony.

Habitat for Humanity — Various Locations, USA
Volunteer — *Fall 2018 - Spring 2020*

- Contributed to multiple home-building projects, including post-Harvey recovery in Houston, TX and new community housing builds in Raleigh, NC, while also volunteering with colleagues around WI.

SKILLS

Technical Skills: MATLAB & Simulink, Python (ML/Scientific), Shell Script (HPC), C/C++, Git/GitHub, LaTeX
Languages: Arabic (native), English (proficient)