Esmaeil Mousavi

Founder, navNote AI | AI/ML, Autonomous Systems & Backend Architecture

Manhattan, NY | esmaeil@navNote.ai | linkedin.com/in/mousavi-ai

Professional Experience

navNote AI (navNote.ai) Manhattan, NY

Founder & Chief Technology Officer May 2026 – Present

- Founded navNote AI in May 2026 and lead its technical organization, building an AI-native platform for enterprise field operations across large-scale image understanding, predictive analytics, autonomous task orchestration, and scalable backend architecture.
- Raised over $250K in angel investment and secured $10K+ in state innovation awards; established partnerships across retail and technology (Kroger, mimik Technologies, Perplexity, iHub Utah).
- Assembled an executive and advisory board including senior leaders from large enterprises; advancing toward enterprise retail deployments from headquarters in the Flatiron District of Manhattan, with a Utah-based technical office.

Weber State University Ogden, UT

Lead Researcher – AI/ML & Backend Systems (navNote origin) 2025 – 2026

- Led faculty-mentored applied research on the system that became navNote AI, spanning large-scale image understanding, predictive analytics, autonomous task orchestration, and scalable backend architectures.
- Developed the early platform and architecture that the venture was built on.

Assistant Researcher – AI in Autonomous Vehicles & Perception Oct 2022 – May 2025

- Conducted applied research in autonomous navigation and perception using reinforcement learning and 3D LiDAR.
- Improved obstacle-recognition accuracy by 25% with SWARM learning models; organized 25+ research tours and lectures.

Graduate Assistant Teacher – CS 6300 (Route Planning & Navigation) Mar 2023 – Dec 2023

- Co-designed and supported a graduate-level course; led hands-on labs on TurtleBot and F1Tenth platforms.

Assistant Researcher – ML for Acoustic Denial & Cybersecurity Jan 2023 – May 2025

- Simulated 100+ acoustic denial-of-service attacks on HDDs; reduced failure rates by 40% with ML-based mitigation.
- Secured competitive funding to present findings at NCUR 2025.

National Center for Water Quality Research Tiffin, OH

Assistant Researcher – ML & Data Visualization Nov 2021 – Sep 2022

- Applied ML to forecast Sandusky River water-quality trends up to eight years ahead from decade-long datasets.
- Processed and visualized large-scale environmental sensor data for state and regional monitoring.

Education

Weber State University Ogden, UT

Bachelor of Science in Computer Science Expected Graduation: May 2027

Academic Distinctions & Honors

- **7th Place Nationally**, International Mathematics Competition (IMC Olympiad).
- **Top-Ranked**, National Entrance Examination, National Organization for Development of Exceptional Talents (NODET).

Publications, Patents & Selected Projects

- *Machine Intelligence Solution for Acoustic Denial-of-Service Attacks on HDDs* (NCUR 2025 submission).
- *Forecasting Sandusky River Particulate Phosphorus Ratios* (NCWQR, 2022).
- *Two-Stroke X-Shaped Engine* (WIPO #WO/2020/026037).
- Designed and deployed a real-time obstacle-detection system for autonomous vehicles.

Leadership & Service

- **Ambassador, IBM Z Mainframe Systems** (2024 – 2025): led student workshops and enterprise systems briefings.
- **Senator, College of Engineering, Applied Science & Technology**, Weber State University (2023 – 2024).
- **Member, Faculty Senate Committees** (Academic Resources; IT Advisory), Weber State University (2023 – 2024).
- **Student Advisor**, NVIDIA & HPE Swarm Learning Project (2023).
- **Member**, Association for Computing Machinery (ACM).