

Mitchell Kain

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Education

- Boston University**, MS in Mechanical Engineering, Dynamics Systems and Controls Jan 2025
- Coursework: Robot Motion Planning, Vibrations of Complex Mechanical Systems, Soft Robotics, Additive Manufacturing, Fluid Dynamics, Thermodynamics, Static Analysis, Dynamic Analysis
 - Graduate Course GPA: 3.92 (3.84 all classes)
- Galvanize Inc.**, Data Science Boot Camp Mar 2020 – Jun 2020
- USMC Primary Flight School**, Second Lieutenant: Student Naval Aviator – Pensacola, FL Jul 2015 – Dec 2016
- Intensive Military Leadership and Aviation training, including: Navigation, Communication (UHF/VHF), Hydraulic Systems, Engine Systems, Aerodynamics, and Military Operations
 - Live flight training hours in Cessna 172 and T6-Texan acrobatic aircraft and simulators
- University Of Rochester**, BS in Applied Mathematics May 2011

Relevant Work Experience

- NASA Langley Research Center**, Aerospace Academy Lead Research Associate – Hampton, VA Jun 2024 – Aug 2024
- Led a diverse team of 12 Mechanical/Electrical/Aerospace Engineers and Physicists to research new technologies and build prototypes
 - Designed Emergency Drone Recovery and Detection Systems to advance safety and security goals
- Galvanize Inc.**, Lead Data Science Resident/Curriculum developer – New York, NY Jun 2020 – Aug 2021
- Revised curriculum, tutorials, and lectures on Python, SQL, Statistics, Probability, Machine Learning, Computer Vision, Data Engineering ensuring most up-to-date and accessible material was delivered
 - Taught Data Science and Python to 40+ Ph.D., Master's, Professional, and Veteran Students Developing the next generation of Data Science Professionals
- USMC 2nd Marine Aircraft Wing**, Captain: Supply and Logistics Officer – Cherry Point, NC Dec 2018 – Dec 2019
- Supervised all ground supply operations for 2nd Marine Aircraft Wing (2nd MAW)
 - Ensured all financial obligations were met and maintained high readiness while mentoring 16 officers and managing inspection teams, ensuring compliance with regulations and standing orders
- USMC Combat Logistics Battalion 6**, First Lieutenant: Supply Officer – Camp Lejeune, NC Dec 2016 – Dec 2018
- Oversaw \$77 million dollars of military equipment and controlled a \$2 million dollar budget keeping the battalion mission capable and its equipment in good repair
 - Procured, implemented, and integrated new technologies into Battalion Procedures as Innovation Officer improving unit capabilities and developing future military procedures

Selected Projects

- Soft Robotics Competition** Mar 2024 – May 2024
- Designed/built a primarily silicone robot to win first place in an Intercollegiate team competition
 - Custom pneumatic actuators propelled 6-legged Soft Robot through an obstacle course consisting of turns, ramps, water, sand, and drop tests
- LiDAR Based Autonomous Hovercraft** Oct 2023 – Dec 2023
- This 3-fan robotic hovercraft processes LiDAR and accelerometer data with onboard Raspberry Pi microcontroller control system that accounts for drift using potential-based path planning methods
 - Has future applications for uneven/amphibious environment security, mapping, or search and rescue

Skills

Coding:	Software:	Physical:	Miscellaneous:
MATLAB	SolidWorks	3D Printing	Leadership
Python	OnShape	Rapid Prototyping	Problem Solving/Design
SQL	COMSOL	Soldering	Research
Arduino	Abaqus	Laser Cutting	LaTeX
C/C++	Simulink	Hand/Power Tools	Technical Writing