Daniel Morton

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EDUCATION

Stanford University **Expected: April 2023**

*M.S. Mechanical Engineering (**Robotics, AI, + Autonomy**) – GPA: 4.00* *Stanford, CA*

- Honors: Finalist, Knight-Hennessy Scholars Program
- **Coursework**: Machine Learning, Decision Making Under Uncertainty (Reinforcement Learning), Robot Autonomy 1+2, Scientific Python, Standard C++. Upcoming: AI, Optimal Control, Experimental Robotics

Cornell University **May 2021**

B.S. Mechanical and Aerospace Engineering – GPA: 4.14 *Ithaca, NY*

- Honors: Summa cum laude, 2019 McManus Design Award, 2019 Goethe Prize for Writing
- Activities: ASME, Orientation Leader, Tau Beta Pi, Reserve Tennis, Ski Club, Order of Omega, Delta Tau Delta

EXPERIENCE

Organic Robotics Laboratory **Aug. 2018 – Sep. 2021**

Research Assistant *Ithaca, NY*

- Lead researcher – Soft-robotic morphing drone wing development using 3D-printed elastomeric lattice structures and embedded fiber-optic proprioceptive sensors.
- First author on pending publication in JCM "Multifunctional Composites for Autonomic, Adaptive and Self-Sustaining Systems"

NASA Marshall Space Flight Center **June 2020 – Aug. 2020**

Intern, Propulsion Research & Technology *Huntsville, AL / Remote*

- Conceptual modeling of a nuclear-thermal airbreathing vehicle launched from a magnetically-accelerated track
- Programmed tools to create, analyze, and optimize 3D-printed heat exchangers

Boeing **May 2019 – Aug. 2019**

Intern, Product Development *Everett, WA*

- Led a team of six to design, pitch, and file a patent for an integrated stowage structure/cabin floor concept
- Designed flight-test electronics components and housings for the 2019 ecoDemonstrator program

PROJECTS / RESEARCH

- Optoelectronically Innervated Elastomeric Morphing Wing Composites
- Elastomeric Matrix for Haptics-Aware Foot and Flesh for Legged Robot
- New Generation of a Bio-inspired Protective Mask Based on Thermal & Vortex Traps
- Optical Lace for Synthetic Afferent Neural Networks

SKILLS & INTERESTS

- **Robotics/AI:** Machine learning, reinforcement learning, ROS, TensorFlow, motion control, localization, mapping, filtering, state estimation, planning algorithms, Markov decision processes, learning-based perception
- **Programming:** Python, C++, MATLAB, Julia, Arduino, C for microcontrollers
- **CAD/CAE:** Inventor, SolidWorks, CATIA, Fusion, AutoCAD, COMSOL, nTopology
- **Miscellaneous:** 3D-printing, product design, DFx, machining, watchmaking. Eagle Scout (2016)