Daniel Morton

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EDUCATION

Stanford University **Expected: April 2023**
M.S. Mechanical Engineering (Robotics + Autonomous Systems) *Stanford, CA*

- **Starting research in Jan. 2022** – Speaking with: Robotics Lab, Autonomous Systems Lab, AI Lab, and more
- Honors: Finalist, Knight-Hennessy Scholars Program

Cornell University **May 2021**
B.S. Mechanical and Aerospace Engineering – GPA: 4.14/4.30 *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

WORK EXPERIENCE

Organic Robotics Laboratory, Cornell University **Aug. 2018 – Sep. 2021**
Research Assistant *Ithaca, NY*

- Lead researcher (first author): *Self-Sensing Morphing Wing via Fiber-Optic-Embedded Compliant Lattice Structures*
- Directed three graduate students across design, analysis, and testing of the project.
- Currently leading the state estimation with deep learning research remotely from Stanford
- Developed topology optimization / design workflows to save 100+ hours across multiple students' research

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 *Mukilteo, WA*

- Led a team of six to design and pitch a new, easily-accessible stowage structure integrated into the cabin floor
- Filed for a patent on the above design
- Designed flight-test components for the 2019 ecoDemonstrator program

Cornell Bio-Inspired Fluids Laboratory **May 2020 – Aug. 2020**
Designer – COVID-19 Masks / Filters (Volunteer) *Ithaca, NY / Remote*

Weill Cornell Medicine **Apr. 2020 – June 2020**
Designer – Artificial Heart Structures (Volunteer) *New York, NY / Remote*

HIGHLIGHTED COURSEWORK

Principles of Robot Autonomy (Fall '21) and **Autonomous Mobile Robots** (Spring '21): Motion control, localization, and mapping, implemented on physical robots and in simulation using: KF, EKF, PF, A*, Dijkstra, RRT, potential functions, SLAM, OpenCV, ROS

Machine Learning (Fall '21): Project: *"Covid-19 Prediction through Google Trends Search Inquiries"*

Decision Making Under Uncertainty (Fall '21): Project: *"Fantasy Football Lineup Optimization via Reinforcement Learning"*

SKILLS & INTERESTS

- **Programming:** MATLAB, Python, C/C++, Arduino, embedded software. Learning: ROS, Julia, Gazebo
- **CAD/CAE:** Inventor, SolidWorks, CATIA, Fusion, AutoCAD, COMSOL, nTopology
- **Miscellaneous:** Robotics, 3D-printing, product design, mill and lathe, watchmaking. Eagle Scout (2016)