

# Alexander Wolfgang Hoppe

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## Summary

Mechatronics engineer with a passion for robotics and multidisciplinary, electro-mechanical design.

## Education

- Embry-Riddle Aeronautical University, Prescott AZ** Fall 2017 – Spring 2022
- Bachelor of Science in Mechanical Engineering, Robotics track
  - 3.97 / 4.00 GPA, graduated Summa Cum Laude
- Highline College, Des Moines WA** Fall 2015 – Spring 2017
- AA with Emphasis in Mathematics
  - 3.82 / 4.00 GPA, graduated with honors

## Experience

- Mechatronics Engineer, Stealth Startup** Summer 2022 – Present
- Developed and deployed autonomous, industrial robotic systems that operate reliably in harsh field environments to facilitate solar energy installation.
- Mechanical Engineer Intern, DEKA Research & Development** Spring 2021 – Fall 2021
- Assisted in the development and implementation of micro manufacturing systems for distributed pharmaceutical manufacturing.
  - Wrote test procedures and created test fixtures to ensure product compliance.
- Mechanical Engineer Intern, Loon (Alphabet)** Spring 2020 – Fall 2020
- Designed mechanical components and assemblies for stratospheric balloons to expand connectivity in underserved communities.
  - Designed custom test fixtures to provide greater insight into temperature dependent material properties and increase simulation fidelity.
- Mechanical Engineer Co-Op, General Dynamics Mission Systems** Spring 2019 – Winter 2019
- Developed electromechanical systems that operate in challenging environments while working in the Undersea and Telecom Systems division.
  - Operated a 3D printing lab while gaining extensive experience managing and maintaining FDM printers
- Teaching Assistant, Embry-Riddle College of Engineering** Spring 2019 – Spring 2022
- Contributed to professor lead research into windshield glare detection and mitigation.
  - Tutored students and graded assignments for MatLab, CAD, and robotics classes.
- Project Engineer, Embry-Riddle CubeSat Program** Fall 2017 – Winter 2021
- Coordinated integration efforts within an undergraduate CubeSat team and ensured compliance with launch provider requirements as a NASA Space Grant Scholar.

## Skills

### CAD / Fabrication

- Solidworks
- Autodesk Inventor
- 3D Printing
- Waterjet / Laser Cutting

### Simulation / FEA

- SolidWorks Simulation
- ANSYS Workbench

### Programming / Software

- MATLAB / Simulink
- Microsoft Word, Excel, Powerpoint
- C, C++, & Python
- HTML / CSS

## Honors

- TBII, ΦΚΦ Honor Society Member
- ERAU Presidential Scholarship
- CoE Dean's List (all semesters)
- 2019 NASA Space Grant Scholar