

# Blake Hord

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I am a 4<sup>th</sup> year undergraduate at Stanford University passionate about mechanical design, manufacturing, test, and product experience.

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## Core Skills

SolidWorks | Nx | ANSYS | MATLAB | Python | C++ | MATLAB | Labview | Final Cut Pro X | Arduino | Mechanical Design | Pressure System Design and Testing | Propulsion Systems Engineering | Hotfire Test and Analysis |

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## EXPERIENCE

### ABL Space Systems

El Segundo, CA

Hardware Development Intern

6/20 – 9/20

- Designed flight hardware using Nx CAD software for integration into propulsion and pressure systems
- Validated performance of design with MATLAB and ANSYS modelling
- Responsible for full life cycle of part from design to manufacturing to testing

### NASA Jet Propulsion Laboratory

Pasadena, CA

Intern

6/19 – 8/19

- Designed pressurized gas system for high force pneumatic actuator
- Utilized SolidWorks CAD software to model mechanism layout, movement, and strength
- Manufactured and assembled mechanism for sub-scale testing of flight project
- Performed system-level analysis of sub-scale test design and its application to a full scale test

### Stanford Propulsion and Space Exploration (SPaSE) Lab – Stanford University

Stanford, CA

Research Intern

6/18 – 6/19

- Created portable demonstration hybrid fuel rocket motor for Aeronautics and Astronautics classes
  - Worked with electronics controls, propellant plumbing, and propulsion mechanics on tens of hybrid motor test fires
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## EDUCATION

Stanford University – Expected Graduation December 2021

Stanford, CA

BS in Aeronautics and Astronautics – 3.9 GPA

Relevant Coursework: Air and Space Propulsion, Space Flight, Design and Manufacturing, Programming Abstractions

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## LEADERSHIP & ENGAGEMENT

### Stanford Student Space Initiative

Stanford, CA

Propulsion Team Co-Lead

9/19 – Present

- Manages school's first liquid propellant rocket engineering team
- Designs, analyzes, manufactures, and tests components for liquid propellant rocket engine
- Works with rocket systems team to integrate and test full rocket assembly

### Stanford University Marching Band

Stanford, CA

Alto Saxophone Section Leader

1/19 – 12/19

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## AWARDS & PUBLICATIONS

Mechentel, F. S., Hord, B., & Cantwell, B. J. (2019). Optically Resolved Fuel Regression of a Clear PMMA Hybrid Rocket Motor. In *AIAA Propulsion and Energy 2019 Forum* (p. 4192).

Hord, B., Lyra, W., Flock, M., Turner, N. J., & Mac Low, M. M. (2017). On Shocks Driven by High-mass Planets in Radiatively Inefficient Disks. III. Observational Signatures in Thermal Emission and Scattered Light. *The Astrophysical Journal*, 849(2), 164.

- Regeneron Science Talent Search – one of 40 National Finalists 2017
  - Destination Imagination – Improvisational problem solving global finalist high school team 2017
  - Siemens Competition in Math, Science, & Technology – one of 6 Individual National Finalists 2016
  - Eagle Scout – organized large-scale service project with 400 volunteer hours over five months 2016
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