

# NOAH PROBST

## PROFESSIONAL SUMMARY

**Mechanical Engineer with direct experience designing, fabricating, and testing liquid rocket engines.**

Full-cycle development of a bipropellant system from concept to hot-fire. Intent on re-entering mechanical engineering after expanding communication and leadership skills in the line of banking (which I left for a 6 month adventure through Asia). Proven ability to merge analytical rigor with hands-on hardware execution. Committed to advancing high-performance rocket engines through data-driven innovation and manufacturing-first design.

## EXPERIENCE

**Assistant Branch Manager** — *Community Banks of Colorado*

JUL 2024 - JUN 2025

- Lead 5 member team for 2 months in absence of a Manager and directly train two new associates into valued team members
- Operations expert, never exceeding 1 finding in critical or non-critical reviews, no repeat findings, and \$0 in losses using risk mitigation

**Relationship Banker I** — *Community Banks of Colorado*

SEP 2022 - JUL 2024

- Produce reports using data analytics which were shared by the bank president to all staff and incited data-driven policy optimizations
- Most reliable and consistent employee known by Manager in his 16 years of management experience

**Propulsion Engineer** — *Colorado State University*

AUG 2021 - MAY 2022 | Spaceport America Cup Rocket Team

- Designed, manufactured, and tested a **600 lbf, liquid-bipropellant (Nitrous Oxide + Ethanol) rocket engine** from clean-sheet for a 10,000 ft altitude sounding rocket with an emphasis on reusable components
- Led development of a novel valve-actuation system, reducing both system complexity and cost by **over 70%** compared to legacy valve design, while improving combustion stability by controlling actuation speed
- Executed **3 major design iterations in 4 weeks** through modular architectures and Design-for-Manufacturing principles, enabling rapid validation of reusable components
- Produced simulations (CFD, FEA, and numerical analysis) for heat transfer of all engine components before manufacture and predicted chamber pressure of hot-fire test results **within ±10%**
- Analyzed implementing a **turbo-pump** or **regenerative cooling channels** before concluding on the pressure-fed system with a high-temperature stainless steel combustion chamber to best meet design constraints

## EDUCATION

**B.S. Mechanical Engineering** — *Colorado State University*

AUG 2018 - MAY 2022

Aerospace Engineering Concentration | Mathematics Minor | GPA: 3.77

Learning Assistant - Thermodynamics & Energy Engineering

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(happy to relocate)

## SKILLS

**Rocket Propulsion**

**Fluid Mechanics**

**Combustion Devices**

**SOLIDWORKS & Onshape (CAD) ANSYS**

**Fluent (CFD)**

**Abaqus (FEA)**

**PID (Control Systems)**

**GD&T**

**Additive Manufacturing**

**Mechatronics**

**Turbo-machinery**

**MATLAB & Simulink**

**Milling & Turning**

**CNC**

## INTERESTS

**3D Printing & Making**

Have been 3D printing for nearly a decade, most recent project being a low cost, low noise air purifier

**Chess**

1.e4 player. Building the world's thinnest (<1") robotic chess board

**Learning**

Self-driven learner and continually expanding my knowledge base

**Travel/Photography**

Recent travels include Japan, Korea, and chasing the 2024 Total Solar Eclipse