SHEA SCHMIDT

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EDUCATION

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY (Prescott, AZ) -- *ABET-Accredited Program*

B.S. Aerospace Engineering - Astronautics, in progress with to be declared minor in mathematics   **GPA: 4.0/4.0**

LUTHERAN HIGH SCHOOL (Parker, CO) – *Valedictorian Graduation Speaker*

High School Diploma   **GPA: 4.8/4.0**

PROFESSIONAL EXPERIENCE

No Entry LLC. (Cheyenne, WY)   5/2020 to Present

Chief Information Officer

Active role in leadership and front-line operational and logistical day-to-day management of programming and financial theory.

Contributions to Team:

◆ Demonstrated leadership of manufacture and implementation of testing cases into a collaborative programming environment that included iteratively designed security features and debugging statements.

◆ Primarily tasked in current role to determine and find solutions to scientific and technological issues within the organization.

ROCKET DEVELOPMENT LABORATORY – SOLID PROPULSION TEAM (Prescott, AZ)   6/2022 to Present

Aerostructures and Propulsion Team Member

Contributions to Team:

◆ Input considerations in the designing, testing, and manufacturing of the university competition flight vehicle suited for the 2024 Intercollegiate Rocket Engineering Competition – Spaceport America World Cup.

◆ Responsible for the design and manufacture of data acquisition cable to provide telemetry uplink from test stand to data collection

◆ computer.

STEM ACADEMY SENIOR CAPSTONE – LUTHERN HIGH SCHOOL (Parker, CO)   8/2020 to 5/2022

Planned, designed, attempted manufacture, and presented a theoretical hydrogen peroxide – kerosene liquid rocket motor.

◆ Interviewed five industry experts to cooperatively advance research, collaboration, and presentation on sections of project.

◆ Applied empirical data from historical sources on kerosene and hydrogen peroxide performance metrics.

◆ Delivered a forty-five-minute speech and presentation detailing design and specifications of motor to peer-audience.

FABRICATED SCALE MODEL CONVERGING-DIVERGING NOZZLE   6/2021 to 5/2022

Sketched, plasma cut, and welded, all with my own purchased equipment, a to-scale (6:1) model of my capstone design out of 3/16-inch steel panels to accommodate for present manufacturing limitations and cost requirements.

◆ Tested proof-of-concept using iron oxide – potassium nitrate – powder sucrose solid propellant mix (R-Candy).

◆ Captured video information on solid propellant test fire to analyze by inspection burn time and gas flow.

SIMULATION OF HEAT DISTRIBUTION & EVOLUTION VIA NUMERICAL METHODS   12/2022

Decomposed the partial differential heat equation in 2D into a numerical model that could be calculated by MATLAB.

◆ Simulated cooling and heating of a uniform two-dimensional plate by animating the evolution of the mapping of the temperature magnitude for each discretized cell into three spatial dimensions.

REPORT ON SPRING-MASS-DAMPER SYSTEM WITH VARIABLE COEFFICIENTS   12/2022

Using the one-sided Laplace transform of the differential system, for variable coefficients on the zero through second derivative terms, I described general behavior of the above system.

◆ Used MATLAB to render displacement for coefficients and initial conditions and created an eight-page report of findings.

◆ Modelled suspension systems and made predictions on how to improve performance given coefficients for spring and damper.

SKILLS & EXTRA-CURRICULARS

— MATLAB, Catia, Python, Java, and JavaScript   — Welding and Applied Material Science

— Technician Amateur Radio License Holder (KF0KSN)   — Society of Physics Students Member