BENJAMIN JAMES DURKEE
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U.S. Citizen

EDUCATION

University of North Dakota, Master of Science *May 2024 - May 2027 (est.)*
MS, Space Studies with a concentration in Space Engineering.

Purdue University, Bachelor of Science *Aug. 2017 - Dec. 2021*
BS, Aeronautical and Astronautical Engineering with a minor in Organizational Leadership.

TECHNICAL SKILLS

Modeling & Drafting in CATIA, SolidWorks, Creo, 3DExperience, with upwards of 1000 hours in NX.
Data Mgmt. in Excel, Jira, Git, Teamcenter, Windchill, Mission PLM, & Solidworks PDM.
Programming in MATLAB, Ruby, HTML, C, & JavaScript **| Scripting** in Python, Perl & Visual Basic (VBA).

EMPLOYMENT HISTORY

Associate Mechanical Engineer - NG Space Systems (Pathways) *June 2023 - August 2024*
- Owned various multidisciplinary mechanical aspects of the Minotaur I & IV launch vehicles.
- Designed, manufactured, installed, and operated new GSE for vehicle roll transfer & pad emplacement.
- Worked w/ Techs, Analysts, Manufacturing, Materials, & EE teams thru design, test, & installation.
- Performed structural, tolerance, corrosion, radiation, & contam. analyses to verify flight readiness.
- Ran the integration & test of mech. components incl. Haz ops & pad emplacement at VSFB.

Associate Electromechanical Engineer - NG Mission Systems (Pathways) *May 2022 - June 2023*
- Conducted mech. design for radar power electronics in the Airborne Multifunction Sensors Division.
- Used NX & Xpedition to design & test Printed Circuit Boards (PCBs), test kits, & heat sinks.
- Created a parametric 3D-printable wrench in NX for techs' use on valves, eliminating valve breakage.
- Rapidly found, diagnosed, and fixed a coolant leak shortly before product delivery to the customer.

GNC Engineering Intern - Raytheon Intelligence & Space *Jun. 2021 - Aug. 2021*
- Regression tested orbit prediction software for NOAA's second Joint Polar Satellite System (JPSS-2).
- Wrote custom orbit traffic scripts for use in Orbit Operations & Mission Management.
- Built a satellite backorbit calculator in Excel using Visual Basic for Applications (VBA).
- Communicated firsthand with customers to improve satellite software items in Ops-like environment.

Technical Intern - Applied Research Associates *May 2019 - Aug. 2019*
- Designed & prototyped mechanical components for the GBU-72/B warhead program.
- Used hand calcs & SolidWorks Analysis to perform structural analysis on joints & bolt interfaces.
- Created & administered SolidWorks PDM network to increase productivity & control revisions.

RELEVANT EXPERIENCE

Mechanical Lead, Purdue Team - NASA Micro-G NExT Project *Aug. 2020 - Jun. 2021*
- Designed & manufactured a coring drill bit & stabilizing jig for use on the lunar surface (Artemis).
- Worked with astronauts & NASA liaisons for design reviews & testing in the Neutral Buoyancy Lab.

Researcher/Journalist, Crews 218 & 236 - Mars Desert Research Station (MDRS) *Dec. 2019 & 2021*
- Collaborated w/ fellow Purdue researchers for two weeks per mission at the simulation Mars Habitat.
- Documented the missions via photo, video, & writing while leading RF propagation research.

Design Lead, Commercial Rocket Team - Purdue Orbital *May 2019 - Aug. 2021*
Member, Commercial Rocket Team - Purdue Orbital *Aug. 2017 - May 2019*
- Designed, built, tested, & launched high-end L-Class solid-fuel rocket (2,200 N total thrust).
- Guided team members through personal rocket construction & High Power Rocketry certification.