BENJAMIN JAMES DURKEE
benjamin.j.durkee@gmail.com | turkeedurk.ee
U.S. Citizen

EDUCATION

Purdue University Bachelor of Science, **GPA:** 3.19 (4.0 scale) ***Aug. 2017 - Dec. 2021***
Majored in 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, Teamcenter, Mission PLM, & Solidworks PDM (Product Lifetime/Data Mgmt.)
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 - Present***

- Member of the Minotaur DI&T team responsible for all mechanical aspects of the launch vehicles.
- Emphasizing the streamlining of future builds while designing for multiple missions in concert.
- Performing structural, corrosion, contamination, & radiation analyses to verify vehicle flight readiness.
- Led the integration & test of many components incl. 2 Hazardous Operations at Vandenberg SFB.

Associate RF 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.
- Overhauled legacy servo signal processor to maintain compatibility & thermal/structural integrity.
- Created a parametric 3D-printable wrench in NX for techs' use on valves, eliminating valve breakage.
- Found & diagnosed an Ethylene-Glycol Water (EGW) leak shortly before product delivery to customer, potentially saving the program tens of thousands of dollars in damage assessment & correction.

Engineering Intern - Raytheon Intelligence & Space ***Jun. 2021 - Aug. 2021***

- Regression tested orbit prediction software for NOAA's second Joint Polar Satellite System (JPSS).
- 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

Manufacturing Lead, Purdue Team - NASA Micro-G NExT Project ***Aug. 2020 - Aug. 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 (5,000 N·s total impulse).
- Guided team members through personal rocket construction & High Power Rocketry Certification.