George Ethan Lukman

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EDUCATION

Purdue University **West Lafayette, IN**
Bachelor of Science in Mechanical Engineering *May 2026*
Overall GPA: 3.7; Dean's List | Semester's Honors

Shoreline Community College **Shoreline, WA**
Overall GPA: 4.0; President's List | Graduated with Honors *September 2020 - June 2022*

EXPERIENCE

Rivian Automotive **Tustin, CA**
Battery DFM Engineering / TPM Intern *January 2024 - August 2024*
- Engineered battery module build fixtures using CATIA through parametric modeling, supporting over 50 module builds, and improving assembly efficiency by 25%.
- Applied ASME standard GD&T to achieve precise tooling fabrication and machining.
- Led cross-functional equipment releases and build plans within the Battery DFM space leveraging Confluence and Jira, ensuring all tooling was fully ready by project start date.
- Developed and standardized Job Element Sheets (JES) across multiple battery manufacturing processes, optimizing operational workflow and increasing production quality consistency.

Purdue Solar Racing **West Lafayette, IN**
Battery Engineer *May 2023 - December 2023*
- Utilized SOLIDWORKS flow simulation to reduce temperature delta within battery pack from 1.5°C to 0.4°C.
- Employed parametric modeling with assembly level constraints to redesign solar car battery pack, reducing existing dimensions by 36%.
- Spearheaded implementation of an efficient battery cooling mechanism, ensuring safety and optimal performance.

Energy and Transport Sciences Lab **West Lafayette, IN**
Undergraduate Researcher *August 2023 - December 2023*
- Developed MATLAB code for importing PNG and TXT files into gmsh for 2D microstructure mesh creation and modification.
- Conducted research on battery materials and technologies, evaluating electrochemical properties and performance using MATLAB and Python.

Purdue American Society of Mechanical Engineers (ASME) Chapter **West Lafayette, IN**
Milestones Course Instructor *August 2022 - December 2023*
- Educated 150+ students in establishing effective FEA setups, boundary conditions, and mesh configurations.
- Mentored 5 Teaching Assistants on types of FEA, including static stress, structural buckling, and dynamic event simulation using Fusion 360.
- Led a CAD/3D printing certification course, training over 100 students in Fusion 360 for design and assembly.

Project Engineer *August 2022 - May 2023*
- Leveraged Autodesk CFD to improve downforce by 30% on the ASME grand prix kart, enhancing speed and stability.
- Managed the BOM to ensure timely access to materials for battlebot manufacturing.
- Reduced manufacturing budget for battlebot by $300, demonstrating cost-saving abilities.
- Designed and fabricated a battlebot using Fusion 360, optimizing its performance and functionality.

LEADERSHIP

Engineering and Technology Society (ETS) **Shoreline, WA**
Vice-President *January 2021 - June 2022*
- Ensured effective communication among club members, officers and department staff, facilitating smooth operations.
- Fostered a collaborative learning environment by mentoring first-year students.

SKILLS

Software: CATIA, SOLIDWORKS, NX, Fusion 360, Autodesk, MATLAB, Python, C, LaTeX, MS, Atlassian
Certification: CAD/3D printing, Introduction to Electronics, Programming with Python, Finite Element Analysis, Geometric Dimensioning & Tolerancing
Language: Bahasa Indonesia, Bahasa Melayu, English, Mandarin