SAMUEL PRASAD

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Skills

Software: Excel, Power Bi, JavaScript, SQL, Python, HTML, CSS, Node.js, Express.js, MongoDB, React, Angular, VBA, Django, Amazon Web Services (AWS), Inventor, Solidworks, Catia, Fusion 360, Simscale.

Projects

Flashy Grain – MERN Full Stack App / April 2023

- Developed a full-stack e-commerce web application using MERN stack (MongoDB, Express, React, Node.js) with Redux for state management and JWT for authentication and authorization.

Fujigram – Django Full Stack App / April 2023

- Developed a full stack web app for sharing Fujifilm photos and recipes with search functionality using Django framework, PostgreSQL database, AWS S3 and bootstrap.

Plate – MEN Full Stack App / Mar 2023

- Developed a full stack web app for sharing food item reviews using MEN stack (MongoDB, Express, Node.js) with google OAuth authentication and authorization.

Experience

Ford Motor Company - Powertrain Engineering Research & Development Centre
Research and Development Intern / Oct 2020 – Aug 2021

- Automated task report generation using VBA, resulting in 15% faster task completion.
- Executed Engine Fatigue Tests, analyzed the results using MATLAB, and produced comprehensive reports to evaluate engine performance and compliance with established company standards.
- Planned, acquired, used, and maintained UV lights to detect leaks in an engine faster and more accurately, preventing major issues and improving the reliability of the engine testing process.
- Led cross-functional teams to design standardized exhaust extractors for 16 engine dyno cells, streamlining testing processes and decreasing test time by 20%.
- Analyzed customer complaints using MATLAB, identified engine issue trends and anomalies, and presented findings with the use of Power BI to Product Engineering and Research teams.

McMaster Automotive Research Center - Center for Mechatronics and Hybrid Technologies
Mechanical Engineering Lab Assistant / May 2019 – Oct 2020

- Conducted research on manuals and CAD drawings to restore the cross-slide of a manual lathe, resulting in a 25% increase in range of motion and a smoother operation.
- Designed and fabricated a chassis dynamometer wheelbase adjustment assembly that enables the testing of various vehicles with different wheelbases, from trucks to small sedans.
- Created 15+ SOPs to establish safe operational guidelines for over 100 researchers and students.

McMaster Satellite Exploration Team - NEUDOSE
Payload Manufacturing Specialist / Sept 2019 – Aug 2020

- Manufactured Canadian Space Agency (CSA) compliant components using a CNC for a CubeSat deployed into Low Earth Orbit to study the effects of ionizing radiation on the human body.
- Utilized Solidworks to design CubeSat structures and produce/audit CSA-compliant drawings.

Education

General Assembly
Software Engineering Immersive Bootcamp / 2023

McMaster University
Bachelor of Mechanical Engineering & Management / Graduating 2023