Jhelan Suggun

MEng Mechanical Engineering

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Profile

Recent graduate in engineering with a passion for programming, learning new skills, and developing innovative applications. Experienced in designing, developing, prototyping, and manufacturing mechanical designs as well as deploying full-stack applications.

Skills

Python | C | Javascript | HTML | CSS | ReactJS | Bootstrap| Material UI | NodeJS | Express | MongoDB | SQL | AWS | Heroku | Vercel | GitHub Actions | GIT | CI/CD | Fluent in French Language

Projects

Portfolio Website

- Programmed and deployed a responsive website to display different projects and skills to users.
- Integrated speech recognition feature to allow navigation throughout the website using speech commands.
- Hosted the website on AWS and Vercel which provides real-time data fetching using API and from databases.

User Management Application

- Developed an app to CREATE, READ, UPDATE and DELETE users from a **MongoDB** database.
- Improved by implementing **mySQL** database and allowing registered users to have their personalised to-do list.
- Implemented schema and user authentication using Jason web token and password encryption.

Autonomous Robot

- Developed an autonomous line-tracking robot using Arduino and stepper motors with H-Bridge driver module.
- Integrated a drop mechanism to release items at designated spots along a path and used PID control for optimisation.

Autonomous Golf Cart Caddy

- Spearheaded the design, prototype, and manufacturing of a release mechanism for deploying golf clubs to users.
- Enhanced the golf cart caddy drivetrain system to be compatible with autonomous driving.
- Experienced using fast prototyping tools such as 3D printing and laser cutting to increase testing times to achieve higher resolution for final product design.

Fingerprint Enabled Mechanism

- Conceptualised and programmed a fingerprint-operated system on STM32 SLYLY capable of unlocking a door remotely.

Work Experience

Support Worker — **Excellence Care Ltd** — Dec 2018 – Present

- Improved clients' mental health condition by teaching new skills and supporting them with medication.

Education

MEng Mechanical Engineering with Automotive Achievements: First Class Honours — **University of Southampton** — Sept 2018 – July 2022

A Level – A*AB — **Loxford School** — Sept 2015 – July 2017

References

Dr Mohamed Moshrefi-Torbati (Lecturer at University of Southampton) – Email: m.m.torbati@soton.ac.uk