Jhelan Suggun

MEng Mechanical Engineering

07496722220 | jksuggun@hotmail.co.uk | Portfolio Website | LinkedIn | GitHub Projects

A highly motivated and innovative individual with experience developing a diverse range of software applications, from full-stack to embedded systems. Possessing excellent communication skills to effectively understand clients' requirements and creatively solve complex challenges. Committed to continuous learning and adapting to evolving technologies, while working with cross-functional teams to deliver successful project outcomes.

PROJECTS

Portfolio Website – Personal Project

- Designed and deployed a responsive website, using **ReactJS**, with voice-based navigation, enhancing user accessibility and experience.
- Implemented **NodeJS** backend to fetch real-time data from APIs, enabling faster and more efficient data retrieval.
- Established a **CI/CD** pipeline on **GitHub, AWS,** and **Vercel** to ensure smooth deployment and maintenance of the website's front-end and back-end.

User Management Application – Personal Project

- Developed an app with full CRUD functionality, enabling seamless user management within a **MongoDB** database.
- Enhanced functionality by integrating **mySQL** database and enabling registered users to create and manage personalised to-do lists.
- Implemented schema design, user authentication using JSON web tokens, and password encryption, ensuring a secure user experience.

Fingerprint Enabled Mechanism – Personal Project

- Designed and developed a remote unlocking system enabling through fingerprint verification.
- Employed communication protocols to effectively communicate with an **STM32** SLYLY microcontroller.
- Proficient in hardware debugging and testing, ensuring efficient resolution of issues.

Autonomous Line Tracking Robot – Group Project

- Designed and developed software for a line-tracking robot using an Arduino microcontroller and DC motors with PID control for path optimisation.
- Integrated and tested software and hardware components within a team whilst adopting an AGILE methodology.
- Ensured a successful project completion by meeting design requirements, and within allocated budgets, and resources.

Autonomous Golf Cart Caddy – Group Project

- Developed a custom release mechanism for deploying golf clubs.
- Optimised the golf cart caddy drivetrain system to support autonomous driving with DC motors and **I2C** communication to the microcontroller.
- Collaborated with multiple smaller teams to deliver the product by meeting deadlines, producing technical reports, and fulfilling client requirements.

WORK EXPERIENCE

Support Worker Excellence Care Ltd Dec 2018 – Nov 2022

- Demonstrated exceptional interpersonal skills through interactions with clients, successfully managing conflicts, and maintaining composure in a high-pressure environment.

SKILLS

- Python
- C
- JavaScript (ReactJS, NodeJS, Express)
- HTML/CSS
- MongoDB
- SQL
- AWS
- Vercel
- GitHub Actions
- GIT
- CI/CD
- Fluent in French language
- Full car driving licence
- Familiarity with AGILE methodologies, communication protocols (UART, I2C, SPI) and ARM Cortex M-architectures

EDUCATION

MEng Mechanical Engineering
University of Southampton
Grade: First Class Honours
Accreditation: IMechE, IEAP
Sept 2018 – July 2022

A Level – (Maths, Physics, French)
Loxford School
Grade: A*AB
Sept 2015 – July 2017