

Samuel Preston

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SUMMARY

Creative, diligent, and pioneering engineer looking for new challenges to solve. After 5+ years in the automotive sector working on in-house software, **saving £1 million per year**, I leverage modern technologies and advancements as well as actively contributing back into the community. I secured a 2:1 at the **University of Warwick** while working full time at Jaguar Land Rover, while doing so I was ensuring the **latest standards** were being adhered to by implementing software configuration tracking across **£20+ million worth in assets**.

TECHNICAL EXPERIENCE

Jaguar Land Rover

Jan 2021 - Present

Framework Developer

Warwickshire, UK

- **Ideated, architected, and lead the development** of in-house software across multiple domains, taking direct customer feedback and iterating on the product. This required communications to **non-technical stakeholders** throughout the senior management for the local domain.
- Using the regulations for automotive diagnostics, I was able to develop internal tooling based around my own developed **open-source libraries**. This allowed for the implementation of parallel communication with embedded computers within vehicles with **Rust**.
- I have **pioneered** the use of the **Rust programming language** within JLR, assisting with those **junior and senior** to understand its benefits and where it can be most valuable within our toolchains. This has already led to the delivery of products of which are able to provide **£1 million** in savings per year.

Jaguar Land Rover

Sep 2018 – Jan 2021

Vehicle in the Loop Engineer

Warwickshire, UK

- **Lead the delivery** of new capabilities by interfacing with research centers such as **National Automotive Innovation Center** (NAIC) and JLR Whitley, to implement **electronics and microcontrollers**.
- Delivered crucial projects to **remotely control components** within the car to perform **end-to-end consumer faced testing**. Delivered to department customers
- Provided **maintenance and process tracking**, as well as led for the **formalisation of the teams processes** within JLR's documentation store, JLR Way.
- Supported the **rapid growth** of the team from 2 to 10 testing rigs, ensuring that onsite visitors and contractors were enabled to **deliver within the time constraints**.

EXTRACURRICULAR

Open Source Contribution

April 2024 - Present

Rust - [DoIP Definitions](#) - [DoIP Codec](#) - [Safety Critical Rust Consortium](#)

- Developed and maintain libraries to support **automotive embedded development** with Rust. Utilising common and **best practices**, I was able to quickly gather **interest from others** to contribute towards a goal of combined specialisation.
- Supported JLR within the **Safety Critical Rust Consortium** to ensure JLR is aware of the progress made towards safety critical Rust.

EDUCATION

University of Warwick

Sep. 2020 – Jul. 2024

2:1 BEng

Applied Engineering - Product Creation

- Demonstrated knowledge through research and presentation of product development utilising **quality assurance techniques** for varying levels of production.
- Generated from **functional requirements** a production system utilising PLCs and the OpenPLC editor software, including **flow control** considerations.
- Selectively enhanced my understanding of the **OSI model** through implementation of an office intranet and internet facilitation using **CISCO Packet Tracer**. This led to further understanding of Transport Protocol layers specifically TCP.