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 leveraged 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 systems within vehicles with **Rust**, during which I utilised matrix CICD jobs to build the binary for multiple targets and publish these along with generated release notes.
- 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**
- Supported the **rapid growth** of the team from 2 to 10 testing rigs, **increasing the testing capacity** of Level 5 in the loop rigs within the business. During this I also took ownership of the **maintenance and bug tracking** to ensure as the team scaled we didn't face unmaintainable systems.

EXTRACURRICULAR

Open Source Contribution   April 2024 - Present
Rust - DoIP Definitions - DoIP Codec - Safety Critical Rust Consortium

- Develop 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, and assessing that JLR explores the latest technologies.

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.