

Jonathan Jamison

Modelling, Simulation & Toolset Engineer

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Versatile engineer with a future-focused skillset and a passion for programming, performance, and emerging technologies. Demonstrated ability to deliver effective, timely results in fast-paced start-up environments. Recognized in both academia and industry for developing novel solutions to complex problems. Continuously deepening expertise through certifications, personal projects, and postgraduate study across multiple domains. A quick learner with strong analytical thinking, presentation skills, resourcefulness, and a proven creative approach to solving technical challenges.

Core Competencies

- Application & Toolset Development
- Dynamic System Modelling
- Machine Learning
- Data Analysis and Visualisation
- Technical Solution Design
- End-User Training and Support
- Process Automation/Optimisation
- Clean & Scalable Programming
- Project Management

Career Experience

ClearMotion, London, United Kingdom

August 2024 – Present

Virtual Tools & Methods Engineer

Senior Engineer at an automotive-tech startup driving innovation in motion-control by integrating machine learning with vehicle dynamics and high-performance hardware.

- Responsible for the development and distribution of bespoke simulation and analysis tools to support delivery of attribute performance & system robustness requirements for both internal and external customers.
- Lead engineer on 'Virtual Sensor' project to replace physical component with a time-series based Neural Network. Developed an automated workflow which performs model training, evaluation, analysis and optimisation. Drive strategic planning and lead cross-functional collaboration for testing and deployment.
- Becoming familiar with real-world 'Big Data' analytics, data science concepts and databases. Support vehicle telemetry acquisition & warehousing workflow, and communicate insights to Director-level stakeholders.
- Continuous improvement of existing toolset through researching new technologies, harnessing multiple programming languages, integrating novel approaches, creating end-user documentation and the application of modelling & programming best practices.

Rivian Automotive, Woking, United Kingdom

February 2022 – August 2024

Vehicle Simulation and Modelling Engineer II

Member of a cross-functional team which drove innovation in automotive simulation by pioneering a software-led approach to vehicle development at a globally renowned electric vehicle startup.

- Recipient of Rivian's *Top Talent* Award in recognition of outstanding performance within role.
- Contributed to the creation of a 'full vehicle' digital twin through subsystem modelling, test suites, and simulation infrastructure to support product delivery across a range of vehicle attributes. Established automated processes for correlation activities with real-world test data by harnessing machine learning.
- Contributed to the development of *Rivian's Vehicle Simulation Interface*, a centralised platform to enable non-simulation engineers to perform full-vehicle simulations using centralised component data. Responsible for many aspects of the tool, including Optimisation Toolboxes, automation routines and multi-domain analysis scripts.
- Reduced physical testing requirements by supporting driver-in-the-loop (DIL) activities.

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IPG Automotive UK Ltd. & Ford UK, London, United Kingdom
Application Engineer

February 2021 – February 2022

Resident Application Engineer designing and building industry-leading virtual test-driving simulations within the Ford UK organization. Responsible for leading several aspects of the inaugural Formula Student Virtual Lap Time competition.

- Enhanced existing technical knowledge and skills within vehicle dynamics modelling, programming best practices, developer tools, and data analysis to produce quantifiable performance improvements for customers.
- As part of the governmental virtual engineering project *VIVID*, created technical end-user documentation, delivered in-person training, led webinars, and authored several articles on simulation development for publication.

Other Relevant Experience

Queen's Formula Racing | Suspension Team Leader & Assistant Performance Team Leader
Provided technical leadership to support highly successful Formula Student team.

August 2018 – August 2020

Generac Power Systems | Engineering Intern, Powertrain Development
Successfully completed two summer internships at Generac HQ in Wisconsin, USA.

Summer 2018 & 2019

Education

Postgraduate Certificate in Artificial Intelligence (PGCert), with Distinction
Ulster University, Belfast, Northern Ireland

Masters-level modules studied as part of scholarship, including Big Data & Infrastructure, Machine Learning, Statistical Modelling & Data Mining.

Master of Engineering in Mechanical Engineering (MEng), 1st Class with Honours
Queen's University Belfast, Northern Ireland

Award winning final year project centred around the creation of a high-fidelity vehicle simulation, inclusive of machine learning for optimal parameter generation. STEM Ambassador & Peer Assisted Learning mentor.

Honours & Awards

Global Undergraduate Awards Winner & Highly Commended Entrant for final year project, 2020

Outstanding Project Award (2nd Place) for final year project, presented by IMechE & NAFEMS, 2020

Degree+ & Millennium Volunteer Award, Queen's University Belfast, 2020

Category Winner and Overall Finalist, *What's the Big Idea? & QUBSU Dragons Den, SU Enterprise*, 2019

Finalist, Leaders within Engineering Scholarship, Royal Academy of Engineering, 2018

Personal Projects

Vehicle Kinematics Viewer | Python

Application which visualises vehicle hardpoints & provides analysis to improve proficiency in OOP and GUI development.

Bicycle Model Neural Network | MATLAB, Simulink, Python, TensorFlow

Replicating behaviour of non-linear dynamic system using automated workflow to train a machine learning based model.

Technical Proficiencies

Software & Tools: Microsoft Office, Simulink, IPG CarMaker, Jira, git, AWS (basic)

Programming: MATLAB, Python, tcl. Improving capabilities in C++ & SQL.