Keane Fernandes

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EDUCATION

MSc Computer Science **Sep. 2020 – Sep. 2021**
University of Bristol *Bristol, United Kingdom*

- Relevant modules – Programming in C (72%), Object-Oriented Programming in Java (78%), Computer Architecture, Cloud Computing, Web Development, Databases, Software Engineering.
- Master's Thesis (Cybersecurity) – Anomaly Detection in Automotive Sensor Data using Machine Learning

MEng Mechanical Engineering **Sep. 2013 – Jul. 2017**
University of Bristol *Bristol, United Kingdom*

- Relevant modules - Thermodynamics, Engineering Mathematics, Computer Based Modelling, Material Science, Fluid Mechanics, Design and Manufacture, Dynamics, Systems and Control, Electronics.
- Master's thesis - Design, Assembly and Testing of a Treadmill used to Investigate Human Balance.
    - CAD modelling of treadmill frame, motor mount. Motor/Controller selection and data acquisition / processing in MATLAB and Simulink.

GCE / GCSE **Sep. 2011 – Jul. 2013**
St. Mary's High School *Dubai, United Arab Emirates*

- GCE – 3 A* (Mathematics, Further Mathematics, Physics)
- GCSE – 10 A* (Mathematics, Physics, Chemistry, Biology, Economics, IT)

WORK EXPERIENCE

Software Engineer **Oct. 2021 – Present**
Alten UK *Birmingham, United Kingdom*

- Software Controls Engineer at Jaguar Land Rover
    - Responsible for the design, release and delivery of the 48V battery commodity with strong compliance to quality, time and cost targets.
    - Leading BMS software development and release activities.
    - Supporting BMS hardware design activities.

Systems Engineer **Oct. 2017 – Oct. 2020**
csi entwicklungstechnik GmbH *Stuttgart, Germany*

- Lead Requirements Engineer for small series production supercar (Hongqi S9).
    - Requirements management across vehicle and system levels (powertrain, packaging, chassis, vehicle dynamics, exterior, interior and EE) in IBM Rational DOORS.
    - Generated traceability views and impact analyses for safety critical functions (ISO 26262).
    - Ensured homologation compliance for EU and Chinese markets.
- Project engineer for prototype development of an IR sensor module for US OEM (Zoox).
    - Created and maintained project schedules, regularly updated bill of materials (BoM) and conducted regular meetings with engineers in San Francisco, Germany and UK.
    - Requirements management in IBM Rational DOORS.
    - Successful delivery of 30 functional prototypes to Zoox in San Francisco.
- Modeling and simulation of automotive batteries in MATLAB and Simulink.
    - Imported voltage data from cell tests from Tier 1 automotive battery supplier into MATLAB.

References available upon request

- Developed cell models using equivalent circuit modelling techniques to simulate voltage responses of different automotive cell topologies under NEDC driving cycles.
- Implemented unscented Kalman filters for state of charge and state of health estimations.
- Presented my work at the Mathworks Automotive Conference 2019 in Munich, Germany.

Manufacturing Engineering Intern **Jul. 2015 – Sep. 2015**

Mercedes-Benz Research and Development *Bangalore, India*

- Simulated production line processes in to identify manufacturing defects in pressed sheet metal parts.
- Modified tool geometries (die design) in Siemens NX Unigraphics to iteratively minimize these defects.
- Quantified material defect regions using non-linear behavioral modelling methods.

Supply Chain Management Intern **Jul. 2014 – Aug. 2014**

General Motors *Pune, India*

- Performed a feasibility study to assess the economic and logistical implications of ending production of one of the car models being manufactured in the plant.
- Computed warehouse space savings, manufacturing line headcount reductions and supplier footprint reductions.

PROJECTS

- **Design and Manufacture of a Coffee Vending Machine** – concept development and evaluation, 3D CAD modelling, manufacturing and microcontroller programming. Tools: Autodesk Inventor, C.
- **CAD Modelling, Design and Assembly of a Steering System** – modelled, assembled and simulated a fully functional double wishbone suspension of a Tesla Model S. Tools: Autodesk Inventor, MATLAB, Simulink.
- **Design, Assembly and Simulation of a Convertible Roof Mechanism** – modelled, assembled and simulated a 10-bar linkage, and selected a suitable motor/gearbox. Tools: Autodesk Inventor, MATLAB, Simulink.

AWARDS & ACHIEVEMENTS

- **Dean's School of Engineering Scholarship** Feb. 2014
- **Head Boy at St. Mary's High School** Sep. 2011
- **GCSE Board Exam Scholarship** Jun. 2011

SKILLS

- **Languages**: English (CEFR C2), German (CEFR B2), Hindi (CEFR B2), French (CEFR A1)
- **Programming Languages:** C (Proficient), Python (intermediate), C++ (basic), Java (Proficient), Git (Proficient)
- **Modeling Software:** MATLAB (expert), Simulink (expert), Simscape (intermediate), Stateflow (intermediate), IBM Rational DOORS (intermediate), DOORS Next Generation (Expert)
- **CAD Software:** Autodesk Inventor (expert), CATIA V5 (intermediate), NX Unigraphics (basic)
- **Certifications:** ISO26262 Functional Safety Engineer (TÜV certified), MATLAB, Simulink, Automotive HV Systems

INTERESTS

- **Programming (Coursera)**: Harvard CS50 Intro to Computer Science, NYU Intro to Cybersecurity, MIT Introduction to Computer Science
- **Personal**: Swimming, Squash, Travelling, Language learning

References available upon request