

# James Harrison

j.harrison.engineer@outlook.com | +44 7700 900123

## PROFESSIONAL SUMMARY

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Senior Manufacturing Engineer with over 12 years of experience optimising high-volume production lines in the automotive sector. Proven track record of reducing operational costs by 20% through Lean Six Sigma implementation and advanced robotics integration. Expert at bridging the gap between product design and large-scale manufacturing execution.

## WORK EXPERIENCE

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### Senior Manufacturing Engineer | Jaguar Land Rover | Solihull, UK

*Apr 2019 - Present*

- Spearheaded the optimisation of the high-voltage battery assembly line, increasing daily output by 30% through bottleneck analysis.
- Managed a £10M capital project for the installation of 15 new Fanuc robotic arms, reducing cycle time by 12 seconds per unit.
- Developed and implemented a custom SPC software module that reduced unplanned downtime by 18% in the first year.
- Collaborated with R&D to refine Design for Manufacturability (DFM) for new cell modules, cutting material waste by £350,000 annually.
- Mentored a team of 6 junior engineers and 20 technicians on Lean Six Sigma principles to foster a culture of continuous improvement.

### Manufacturing Process Engineer | Rolls-Royce | Derby, UK

*Aug 2014 - Mar 2019*

- Designed and validated precision manufacturing processes for aerospace engine components using SolidWorks and MATLAB.
- Reduced the cost of quality by 25% by implementing a comprehensive Root Cause Analysis programme for component failures.
- Facilitated 12 Kaizen events focused on shop floor layout, resulting in a 20% reduction in material handling travel distance.
- Managed relationships with Tier 1 suppliers to ensure 99% on-time delivery of critical custom-machined parts.
- Authored over 50 Standard Operating Procedures (SOP) that standardised production across two facility locations.

### Manufacturing Engineering Specialist | Siemens | Manchester, UK

*Jun 2010 - Jul 2014*

- Oversaw the transition of 4 high-speed SMT lines from prototyping to full-scale production for industrial automation clients.
- Improved Overall Equipment Effectiveness (OEE) from 72% to 88% through the implementation of a Predictive Maintenance schedule.
- Led a cross-functional team to achieve ISO 9001 recertification with zero major non-conformities found during the audit.
- Negotiated with equipment vendors to secure a 15% discount on a new pick-and-place machine suite, saving £95,000.

## EDUCATION

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### **Loughborough University | MSc | Manufacturing Systems Engineering**

*Sept 2008 - Jun 2010*

### **University of Nottingham | BEng (Hons) | Mechanical Engineering**

*Sept 2005 - Jun 2008*

## SKILLS

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AutoCAD & SolidWorks, PLC Programming, Robotics & Automation, Process Mapping, Tooling & Fixture Design, ERP/MRP Systems (SAP, Oracle), Lean Manufacturing, Six Sigma (Green/Black Belt), Root Cause Analysis (RCA), Statistical Process Control (SPC), ISO 9001 / AS9100 Standards, Total Quality Management (TQM), Project Management, Vendor Management, Cross-functional Leadership, Budget Forecasting, Technical Writing

## CERTIFICATIONS

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Six Sigma Black Belt | British Quality Foundation (2016)

Chartered Engineer (CEng) | Institution of Mechanical Engineers (IMechE) (2012)

## LANGUAGES

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English (Native)

German (C1 - Professional Working Proficiency)

## ACTIVITIES

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### **IMechE Annual Conference Speaker**

Presented a case study on 'Integrative Automation in High-Volume Battery Production' to an audience of 200+ industry professionals.

### **STEM Ambassador**

Weekly mentor for local secondary school robotics teams, teaching students about CAD design and mechanical assembly.