

# Rohit Avadhani

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## Work experience

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**KTP Associate - Queen's University of Belfast and WD Meats** *November 2022 - On Going*  
*Process Improvement and Automation Lead* *Belfast, Northern Ireland*

- Embedded real-time process control using C++ on Ubuntu 20.04 with a focus on HMI integration, achieving lean manufacturing metrics such as cycle time and scrap as % VOP.
- Parametric designs for gut trays on the kill floor and digital twin design on Unity AR leading to a decrease of 1 week in total planning hours.
- Integrated and managed small scale SCADA for condition monitoring for kill floor motors with focus on predictive maintenance.
- Bespoke Inventory management architecture design and built using .Net Framework and SQL, modelled to forecast buyer needs and production that helps improve slaughter line based on orders and sales from last month.
- Data acquisition through SQL and developed a .net application on C# for capturing and visualizing insights on data as well as monitoring progress on the production line for Senior management and the Floor supervisors.
- Develop and document New Process/Product Introduction (NPI) processes that bring together the key elements of process/value stream mapping, digital simulation modelling, costing/business case generation and the support required for shop floor implementation

**Graduate Student** *September 2021 - September 2022*  
*Robotics and AI MS* *Glasgow, UK*

- Team lead - Robotics Soccer Simulation using MATLAB, C++ and Simulink. 6 v 6 football game with one team on Fuzzy logic and the other team on Brute force algorithms.
- Parameter Identification of a Compliant 3D printed Damper using Piezo electric sensors, data acquisition using NIDAQ and ABABUS 9000, analysis on MATLAB.

**Amazon Robotics** *December 2019 - January 2021*  
*Solutions Design Engineer* *Massachusetts, USA*

- Part of the EU-APAC team leading contractors and engineers into deploying Amazon fulfillment centers in EU.
- Scripting using python to improve designing and budgeting on AutoCAD, Mapeditor and excel which lead to a higher deployment speeds.

**Fusion Tech Inc** *October 2018 - December 2019*  
*Mechanical Design Engineer* *Illinois, USA*

- Project lead - Vertical conveyor and grading production line for meat processing. Designed and delivered production worth over 100000£ within the time limit set by the project manager
- Working with stakeholders to identify the area of improvement and produce a 20% reduction in labour while upping the efficiency of the line through automation.

## Education

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**MS Robotics and AI** *University of Glasgow*  
*Emphasis on PINN for Vibration Analysis* *September 2021 - September 2022*  
*Thesis title:Parameter Identification of a Compliant 3D printed Dynamic Damper for Soft Robotics*

**MS Aerospace Engineering***Emphasis on Composite modelling and design**Thesis Title: Comparative Study Between Wooden and Hybrid Composites on Crossarms**University of Texas at Arlington**January 2016 - December 2017***BTech Aerospace Engineering***Emphasis on CFD**Senior project: Design and Development of water propelled resistojet**SRM University**August 2011 - June 2015****Technical skills***

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**Programming Languages/Tools**C++, Python, L<sup>A</sup>T<sub>E</sub>X, MATLAB, Ladder Logic Programming, Emulator based RSLogix500, Ubuntu (Linux Distribution Pkg)**CAD Technologies**

SolidWorks, Visual Components, Gazebo, Ansys

**Technologies**

SQL, NOSQL, ROS, ROS2, Tensorflow, Pytorch, AWS, PowerBI

**RoboKafka on GitHub**