Rohit Avadhani

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Work experience

Automation and Process Engineer - WD Meats *November 2022 - Ongoing*
Coleraine, Northern Ireland

- Designed, programmed, and deployed a tamping system using PLC Opta and affiliated sensors for the roast line, potentially decreasing labor by 3 operators and saving about £60,000 a year.
- Designed and deployed an Intelligent Weighing scale system using Rs232 module, Arduino wifi, created an MQTT client and broker to display real time values for accurate cuts.
- Embedded real-time process control using Visual Stuio and C# with a focus on HMI integration, achieving lean manufacturing metrics such as cycle time and scrap as
- 3D factory Simulation , data modelling and activity based cost estimation for 3 seperate lines , showcasing production rates, bottle necks and addition of intelligent systems.
- 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 a focus on predictive maintenance.
- Bespoke Inventory management architecture design and built using .Net Framework and SQL, modeled to forecast buyer needs and production.
- 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.

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

- Part of the EU-APAC team leading contractors and engineers into deploying Amazon fulfiment 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.

Technical skills

Programming Languages/Tools	C++, Python, LaTeX, MATLAB,Ladder Logic Programming, Emulator based RSLogix500, ROS2,Arduino Opta PLC
CAD Technologies	SolidWorks, Visual Components, Gazebo, Ansys
Data Analytics Platform/Languages	SQL, NOSQL, Tensorflow, Pytorch, AWS,PowerBI
RoboKafka on GitHub	

Education

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 *University of Texas at Arlington*
Emphasis on Composite modelling and design *January 2016 - December 2017*
Thesis Title: Comparative Study Between Wooden and Hybrid Composites on Crossarms

BTech Aerospace Engineering *SRM University*
Emphasis on CFD *August 2011 - June 2015*
Senior project: Design and Development of water propelled resistojet