Shivesh Narain B

Contact No:+353892375517 **Address**: Limerick,Ireland **Linkdin**: Linkdin **Email**: shiveshnar@gmail.com

Skills:

PLC & HMI Programing / Software: Ladder Logic, AB Studio5000, FactoryTalk, Siemens TIA portal, GXWorks, Ignition, Node red.

Industrial Automation & Control Systems: LabView, RTtoolBox - MELFA Basic V.

Engineering Simulation & Modeling: Matlab, Simulink.

Programming Languages: Python, Shell Scripting, C++, Arduino.

CAD Software's: SolidWorks, Catia.

Analytics software/Database: PowerBI, Word, SQL, MongoDB, MS Excel, PowerPoint and

Manufacturing Standards: ISA-88, ISA-95, ISO 12100

Industrial Communication Protocols: EtherNet/IP, Modbus, TCP, DigitalIO

Soft Skills: Fast learner with a growth mindset, Proactive in seeking clarifications, Time Management, Team Player, Effective communicator.

Work/Professional Experience:

Research Assistant - University of Limerick (Edward lifesciences) **July 2025 – Present**

- Collaborating with Edward Lifesciences to design and develop an automated assembly system for a sub-assembly process of oximetry catheters, focusing on precision, efficiency, and medical grade compliance.
- Building AI-based vision systems, 3D printing custom components, and prototyping full scale automated solutions for precision assembly and inspection processes.

University of Limerick – Mechatronics Masters project **September 2024 - September 2025**

AutoSort-CGM: Automatic Sorting of shredded plastics of DEXCOM Continuous Blood Glucose Monitor (Medical Waste):

- Achieved 100% sorting efficiency of ferrous metals and 4 types of plastics from shredded Dexcom CGM applicators by designing and fabricating a magnetic conveyor system and a 3-chamber float-sink apparatus using liquids of different densities respectively.
- Designed a safe batch sorting automation by applying ISA-88, including URS, FDS, DDS, and SFC, and integrated ISO 12100-based safety measures and thus I ensured that the system is 100% safe, robust and maintained industry standards.
- Led 50% of hardware build and testing efforts, collaborated with teammate on system-level integration.
- Integrated sensor-driven automation through Arduino and PLC collaboration, enabling intelligent control of pumps, servo motors, and pneumatic actuators via synchronized digital I/O.
- Simulated and tested control logic using GX Works and Arduino IDE, ensuring smooth material flow, safety interlocks, and reliable sorting decisions based on system state.
- Designed and fabricated mechanical and electrical subsystems, including custom sheet-metal chambers, 3D-printed components, and safety features, ensuring robust system integration and operator safety compliance.

Company: Celebal Technologies **June, 2021 – November, 2023**

Role: Associate - Computer Vision & ML

- Collaborated with various teams to research, design and develop POCs for energy-related assets.
- Effectively secured Presales projects by engaging clients with a success rate of 70%.
- Collected transmission line yard data from a Malaysian client and utilized augmentations to address data imbalance. Integrated Azure Custom Vision's object detection with the Segment Anything Model for multi-defect segmentation, enabling real-time defect detection with a response time of 7s, achieving a MAP of 95% and MAR of 92.5%.
- Identified optimal solar panel installation locations with 96% accuracy by utilizing Azure Maps for satellite imagery, applying Real-ESR-GANs for image enhancement, and fine-tuning the MMDetection framework based on provided (lat, long) coordinates.
- Devised an auto-versioning XgBoost model for windmill power prediction using Databricks MLflow, integrating features related to windmill, location and atmospheric conditions. Attained an RMSE of 0.017, improving scalability by 75% through use of feature store.
- **Skills involved during my experience at Celebal Technologies. (Computer Vision, ML, IT / Data Science & others) -** Pycharm, pyspider, jupyter notebook, VScode, Computer Vision, Natural language Processing, Classical Machine Learning, Azure Cognitive services, Databricks, Python, MLOPS, Django/FastAPI/Flask, Data featuring and engineering, SQL, Azure ML, Azure Container Instance, Azure Kubernetes Service, Pyspark, Agile, Azure, Docker, Kubernetes, Redhat, YAML, Postman (for api testing), Azure Devops, GIT, Git hub.

Education:

MEng. Mechatronics, University of Limerick, Ireland **September 2024 - September 2025**

B.E. Mechanical Engineering, Chennai Institute of Technology, India ***May 2018 - May 2022***

Certifications:

- Solidworks Associate
- Matlab onramp,
- Simulink onramp.
- Microsoft Azure AI Fundamentals.
- Data Science Solution on Azure.
- Microsoft Azure AI Solution.
- Six Sigma - Kennesaw State University
- Microsoft Azure IoT Developer.

References:

Dr. John Carr: john.carr@ul.ie **Mobile:** +353 86 2334020

Dr. Eoin Hinchy: eoin.hinchy@ul.ie **Mobile**: 061 20 2136