

Varshani

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EDUCATION

- MSc. Data Science** **Sept. 2024 – Sept. 2025**
University of Bristol *Bristol, UK*
- B.Tech in Computer Science and Engineering(1st Class Distinction)** **Sept. 2020 – May. 2024**
Birla Institute of Technology, Mesra *Ranchi, India*

SKILLS SUMMARY

- Languages:** Python, R, C/C++, JavaScript, SQL, HTML, CSS, GraphQL
- Tools & Methodologies:** AWS, MySQL, MongoDB, ZenML, MLflow, Scapy, Pandas, NumPy, scikit-learn, TensorFlow/Keras, Jupyter, NLP, Matplotlib, Seaborn, Plotly, Tableau, Git & GitHub, MS Office, Scrum, Kanban
- Soft Skills:** Strong Communication, Teamwork & Collaboration, Problem-Solving, Adaptability, Time Management, Leadership, Attention to Detail, Critical Thinking, Creativity

EXPERIENCE

- Sainsbury's – Online Assistant** **Nov 2024 – Present (Bristol, UK)**
 - Delivered 200+ weekly online orders with high accuracy, ensuring **customer satisfaction through precise substitutions and timely fulfillment.**
 - Collaborated with teammates to manage **peak-hour demand, optimize workflows, and maintain strong customer service standards.**
- Astrojen Health Care Private Ltd. – Software Engineer (Internship)** **Jan 2024 – Apr 2024 (Remote, India)**
 - Developed critical **Admin Panel components** with React.js, Node.js, and MongoDB, boosting team efficiency by **40%.**
 - Automated 50+ actions by integrating **MongoDB triggers with AWS Lambda**, enabling seamless data transfer to SQL databases.
 - Built a **React.js eQuotation system with PDF automation**, cutting document generation time from **20 minutes to 2 minutes** and improving client satisfaction by **30%.**
- Business Web Solutions (BWS) – Full-stack Developer Intern** **May 2023 – Jul 2023 (Remote, India)**
 - Developed an **e-commerce fashion app** using the MERN stack, scalable to handle **500+ product listings** and **1,000+ daily active users.**
 - Implemented and optimized **APIs** for inventory, payments, and order processing, reducing update delays and ensuring **real-time synchronization.**
 - Designed **15+ reusable, responsive UI components** and optimized database queries, improving load times and **boosting user engagement by 25%.**

PROJECTS

- End-to-End ML Pipeline for House Price Prediction**
 - Replaced manual ML workflows with an **automated pipeline**, streamlining EDA and **30+** preprocessing steps to cut data preparation time by **~ 60%** and minimize feature engineering errors.
 - Engineered **reproducible workflows** with ZenML and MLflow, tracking **100+** experiments and boosting regression performance by **~ 33%** while reducing error variance by **~ 70%.**
 - Automated **CI/CD-style retraining and redeployment**, reducing deployment cycle time by **~ 75%** and enabling both batch and real-time inference via REST APIs.
- An End-to-End Pipeline for Anomaly Detection in Thread Networks (Research Dissertation)**
 - Developed a structured pipeline for **Thread IoT anomaly detection**, automating packet parsing, annotation, and feature extraction to cut manual analysis by **~ 60%.**
 - Engineered **33** statistical and protocol-aware features and applied unsupervised ML models (autoencoder, One-Class SVM), reaching **~ 90% detection** for energy depletion and jamming attacks.
 - Introduced one of the **first** pipeline-based approaches for Thread networks, contributing a methodology that supports future IoT security research.

VOLUNTEER AND LEADERSHIP EXPERIENCE

- Secretary, IEEE Student Branch** **Aug 2022 – Dec 2023**
Coordinated 15+ events, impacting 10,000+ students, and secured \$208 in funding for best-performing branch.
- Graphics Lead, Google Developer Student Clubs BITD** **Aug 2021 – July 2023**
Designed and delivered comprehensive workshops on programming fundamentals and creative visual design, effectively enhancing technical proficiency and engagement for over 200 students, demonstrating strong teaching and mentoring abilities.
- Led sessions for **DRISTI NGO**, aiming on education and women's empowerment in underprivileged **July 2021 – Aug 2023** communities.