

Gautam Bulusu

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📁 My Portfolio

EDUCATION

University of Maryland, College Park Aug 2025 – May 2027
MS in Applied Machine Learning

KJ Somaiya College of Engineering, Mumbai (affiliated to Somaiya Vidyavihar University) May 2024
B.Tech in Information Technology - CGPA: 8.54/10.00

WORK EXPERIENCE

Reliance Brands Limited, Mumbai Jul 2024 – Mar 2025
Software Engineer Intern

- **Built** an end-to-end Python + Streamlit financial analysis platform, replacing legacy Excel workflows and **reducing processing time by 80% (weeks → days)** for cross-functional teams across **71 international brands**.
- **Automated** Tableau reporting with Python scripts (login, navigation, filtering, downloads), **saving ~6,250 employee-hours annually** by eliminating repetitive daily tasks for **25 analysts**.
- **Optimized** the firm's "**Waterfall Process**" by integrating data pipelines into in-app dashboards (**Store P&L, IRR, Payback, Cashflow, PERT**), delivering **real-time insights** to stakeholders including the **CFO and CEO**.
- **Deployed** applications on **Azure App Services**, ensuring **enterprise-grade scalability, reliability, and security**.

INTERNSHIPS

Jio Institute, Navi Mumbai Jun 2023 – Sep 2023
Computer Vision Intern

- Leveraged **Meta's Segment Anything Model (SAM)** with a **weakly supervised training pipeline** to segment vertebrae in **3D/4D CT scans**, reducing reliance on fully annotated datasets by **~60%**.
- Engineered an **automated pipeline** to extract vertebrae centroids and compute **Cobb angles** for scoliosis assessment, achieving **92% accuracy** compared to radiologists.
- Processed and analyzed **374 4D CT scans** from the **VerSe 2019–2020 Grand Challenge** dataset.
- Accelerated **clinical workflows** by **30%**, showcasing the potential of **AI-assisted diagnosis** in orthopedic imaging.

TECHNICAL EXPERIENCE

Team KJSCE Robocon – Vice-Captain and Software Lead Aug 2022 – Jun 2023

- **Conducted** training for 40–50 juniors on Data Structures, Embedded Programming, and Image Processing.
- Explored **MATLAB, ROS, deep learning** for robotic automation.
- Integrated Kinect sensor on Jetson Nano for arena mapping and robot automation.

Team KJSCE Robocon – Coding Team Member Sep 2021 – Aug 2022

- Implemented **Dijkstra's algorithm** for robot path planning, reducing round time by **3s**.
- Fine-tuned **YOLOv5 model** on 1200 images, deployed on Raspberry Pi for real-time targeting.
- Contributed to team achieving its highest-ever All-India rank – **6th place at ABU Robocon (IIT Delhi)**.

ACADEMIC PROJECTS

Mangrove Assessment using Satellite Imaging Oct 2023 – Apr 2024
KJ Somaiya College of Engineering, Mumbai, India

- **Assessed** mangrove coverage in Maharashtra (2002–2022) and noted **1651.94 hectares of loss**.
- **Developed** spatial simulation models in Python and Google Earth Engine for restoration feasibility.
- **Determined** that **Random Forest outperformed SVM** by 3.06% accuracy.

Ocular Diseases Detection Jan 2023 – Apr 2023
KJ Somaiya College of Engineering, Mumbai, India

- **Developed** deep learning models using **VGG16** and **MobileNetV2** with transfer learning to classify glaucoma, cataract, and diabetic retinopathy.
- Achieved **F1 scores: 0.97 (Normal), 0.69 (Cataract), 0.90 (Glaucoma), 0.88 (Diabetic)**.

TECHNICAL SKILLS

- **Programming:** Python, C, C++, SQL, R, Java, JavaScript, HTML/CSS, MATLAB, PHP
- **Tools:** GitHub, Google Cloud Platform, VS Code, PyCharm, Eclipse, Jupyter Notebooks, Android Studio, MicroChip Studio, Power BI, Tableau, Cisco Packet Tracer, MS Office, Azure