SHREYA BASAVARAJ DEVAGIRI

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Education

The University of Texas at Dallas   **Aug 2025 - May 2027**
Master of Science, Computer Science

Relevant Coursework: Machine Learning, Computer Vision, Database Systems, Network Security

KLE Technological University, Hubli, India   **Dec 2020 - May 2024**
Bachelor of Engineering, Computer Science   *CGPA: 9.46/10*

Experience

Mercedes Benz Research and Development India   **Oct 2024 - Aug 2025**
DevOps Engineer   *Bangalore, India*

- **Automated ECU Testing** on **Embedded Hardware**, reducing manual effort by **70%** and overall validation time by **60%**, ensuring faster and more reliable **System Verification**.
- Implemented **Automated Test Reporting Pipelines** using **Custom HTML Email Services** and **Real-Time Failure Notification Systems**, reducing **Defect Detection Time** by **50%** and accelerating **Incident Response**.
- Designed and **Filed a Patent** for an in-house **CI/CD Pipeline Recovery and Self-Healing Tool**, enabling rapid **Root Cause Analysis (RCA)**, improving **Pipeline Resilience**, and reducing **Mean Time to Resolution (MTTR)** by **65%**.
- Led **Build System Migration** from **CMake to Bazel** and integrated **Gazelle-based Rule Generation**, optimizing **Build Orchestration**, improving **Build Throughput** by **50%**, and eliminating manual build configurations.

Mercedes Benz Research and Development India   **Feb 2024 - Sep 2024**
Student Intern   *Bangalore, India*

- Built and optimized **GitLab CI/CD pipelines** to automate **source control workflows**, **test execution**, **job orchestration**, **result reporting**, and **database integration**, improving **build reliability** and enabling **real-time monitoring** in **Grafana**.
- Developed **Python Automation Scripts** and **PowerShell Scripting** for **XML Test Data Processing**, **Log Parsing**, and **Automated Hardware Build Deployment**, reducing manual configuration and setup time by **70%**.
- Designed and implemented **SQL-Based Dashboards** using **Grafana Visualization**, enabling **Test Analytics**, **System Health Monitoring**, **Failure Trend Analysis**, and **Data-Driven Engineering Decisions**.

Skills

Programming & Framework: Python, C, C++, SQL, Shell/Bash
Cloud and DevOps: AWS, Linux, Docker, Jenkins, Git, GitHub, CI/CD, Bazel, Grafana, MLOps
Databases: MYSQL, PostgreSQL

Projects

Plant Leaf Disease Detection using XAI   **Aug 2023 – Dec 2023**

- Curated and enhanced a dataset of **10,000+ plant leaf images**, improving model training quality and increasing detection accuracy by **25%**.
- Built an **Explainable AI (XAI) model** achieving **92% classification accuracy**, providing visual heatmaps and feature-level explanations for disease diagnosis.
- Developed a **Flask-based web application** supporting real-time image uploads, delivering health assessments in under **2 seconds per image**.

Vision-Based Quality Control Check of TubeShaft   **Sep 2022 – Jan 2023**

- Annotated **5,000+ industrial images** using **Roboflow**, improving training dataset quality and reducing labeling errors by **40%**.
- Applied **OpenCV-based image preprocessing** to enhance defect visibility, improving detection precision by **20%**.
- Trained a **YOLOv5 object detection model** achieving **90%+ mAP** for real-time industrial defect detection.
- Built and deployed a **Flask web application** that automated inspections, reducing manual quality-check time by **60%** and centralizing results in a database.

Awards and Honors

- **Implemented Patent Award 2025** — Mercedes Benz Research & Development India
- **Hackathon 2025 Winner**: MB Smart Cafe — Mercedes Benz Research & Development India
- **Best Debutant College Award (Top Performance)** — Mercedes Benz Research & Development India
- **Third Rank, B.E. Computer Science, 2024** — KLE Technological University