SUMMARY

Detail-oriented engineer with 3 years of experience in the automotive industry, specializing in data-driven and model-based software development. Proficient in Python, C++, MATLAB/Simulink, and SQL, with a strong focus on clean, maintainable code. Expertise in machine learning, MLOps, computer vision, and control engineering.

SKILLS

- **Programming Languages**: Python 3, C++, MATLAB/Simulink, SQL
- **Machine Learning and AI:** PyTorch, TensorFlow, Keras, MLOps (MLflow), Scikit-learn, NLP (Transformers, Hugging Face, Seq2Seq, BERT), LLM, XGBoost, LightGBM, Hyperparameter Optimization (Bayesian, Optuna)
- **Big Data and Analysis**: MySQL, PostgreSQL DBMS, Distributed Computing (DASK), Power BI
- **Computer Vision**: Open CV, Mediapipe
- **Data Visualization**: Matplotlib, Seaborn, Scipy, Plotly, Dash
- **Data Engineering**: CI/CD Pipeline, ETL, Data Warehousing, Data integration
- **Testing and Debugging**: Pytest, Unit Testing, Vscode
- **Cloud Services**: Microsoft Azure, Azure ML
- **Containerization**: Docker, Kubernetes
- **Automotive Technology**: CANoe, CANalyzer, LIN, Ethernet, AUTOSAR, ISO26262
- **Web Development**: Flask, RESTful API, Streamlit
- **Version Control & Collaboration**: Git, GitHub, GitLab, Bitbucket, Confluence
- **Operating System**: Windows, Linux (Ubuntu), Bash Scripting
- **Microsoft Office**: Excel, PowerPoint, Word
- **CAE and CAD Softwares**: Catia V5, SolidWorks, AutoCAD, Ansys
- **Soft Skills:** Team Player, Team Leadership, Technical Sales, Problem-Solving, Decision-Making

LANGUAGES

- English (Fluent, level C1)
- German (Good, level B1)
- Hindi and Marathi (Native)

ACADEMIC PUBLICATIONS

- "Integration of Intelligent Transportation Systems for Optimizing Sustainability and Efficiency in Commercial Vehicle Operations" (CVT Seminar 2023)
- "A Comparative Analysis of Visual SLAM and LiDAR-based SLAM algorithms for Autonomous Vehicles" (CVT Scientific Writing 2022)
- "Design and Optimization of Vaccum-assisted Brake system for Light Commercial Vehicles" - International Journal of Engineering Research and Technology (IJERT, Vol. 10, Issue 9, Sept. 2021)

SARVESH TELANG

Software Developer

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WORK EXPERIENCE

Working Student — *Stuttgart-Feuerbach, Germany*
Robert Bosch GmBH — *Sept 2023 – Nov 2024*
- Led the label quality assurance team within the Automated Driving Alliance (Volkswagen Cariad & Bosch) for Level-3 systems
- Managed quality control and feature engineering tasks for labels in ML models for lane detection
- Improved label accuracy by 40% through regular feedback to suppliers
- Created weekly quality reports and error analysis to support continuous quality improvement
- Developed a Python-Tool for automated quality assessment and integrated it into the CI/CD-Pipeline
- Designed a web-application with dynamic dashboard (using Azure and SharePoint API) to perform quality checks in real-time

Data Science Intern — *Schwieberdingen, Germany*
Robert Bosch GmBH — *Oct 2022 – Mar 2023*
- **Internship Topic**: Enhancement of ADAS Hardware Development Process through Machine Learning, Cloud Deployment and Vehicle Sensor Data Analysis
- Implemented an AI-based knowledge discovery framework for the automotive camera's Manufacturing Process
- Migrated the Python version of multi-objective optimization algorithm, increasing the computation accuracy by 6%
- Performed debugging to scale the code using Dask over HPC clusters, ensuring functionality on Windows and Linux
- Deployed the code over Azure cloud using Azure ML and Docker to share and collaborate with external clients
- Analyzed vehicle measurements from SHT and Type K sensors at 20+ ADAS sensor mounting locations
- Developed a python tool to investigate the impact of temperature and humidity on driving behavior and sensor correlations
- Created a MATLAB tool to visualize driver profiles across different time, weather, and road conditions

Process Executive — *Pune, India*
NVIDIA — *Apr 2021 – Aug 2021*
- Performed image and video frame annotations for autonomous vehicles and their chassis control systems
- Worked on multiple annotation projects using NVIDIA HL2 platform, including Obstacle detection, VRU detection, LiDAR Free space detection, and Parking assistance

Technical Sales Engineer — *Pune, India*
Speciality Innotech Pvt. Ltd. — *Oct 2019 – Oct 2020*
- Assisted in developing customized polyurethane products including Vehicle Engine mounts, MPU buffers, and PU panels
- Conferred with customers and engineers to assess equipment needs and determine system requirements
- Utilized CAD and CAE softwares (AutoCAD, Ansys, SolidWorks) to perform feasibility checks through structural analysis
- Managed B2B sales operations in the South India region, including prospecting, pitching, and closing new business deals
- Secured 20+ new accounts and increased qualified leads by 16% in a year through targeted marketing strategies
- Oversaw the Order to Cash process for POs, including procurement and inventory management

EDUCATION

Master of Science in Commercial Vehicle Technology (*Nutzfahrzeugtechnik*) — *Kaiserslautern, Germany*
RPTU Kaiserslautern-Landau — *Oct 2021 – Today*
- CGPA (current): 1.9 (Good – German Grading System)
- **Thesis**: DNN-based Virtual Trajectory Generation for Autonomous Vehicles: Focus on Local Reference Path Computation
  - Developed a virtual trajectory prediction framework using a spatio-temporal road inference approach
  - Trained a Seq-2-Seq Transformer Model for robust lane keeping, solving a multi-variate time series forecasting problem
  - Integrated the predicted trajectory into a vision-based MPC framework and simulated it in the CARLA Simulator
  - Grade: 1.3 (Very good– German Grading System)

Bachelor of Mechanical Engineering — *Pune, India*
Pune University — *Aug 2015 – Jul 2019*
- CGPA: 8.81/10 (Very good – equivalent to 1.5 in German Grading System)
- **Thesis**: Design and Analysis of a Cost-Effective Cylindrical Robotic Arm
  - Grade: 1.0 (Excellent– German Grading System)

PROJECTS

Sampling-based Motion Planning with Obstacle Avoidance for a 7-DOF Robotic Arm — *Aug 2023 – Sept 2023*
Control Engineering Seminar
- Implemented CBi-RRT (Constrained Bi-Directional RRT) algorithm for efficient path planning of a robotic arm using MATLAB
- Computed the shortest and smooth path while avoiding obstacles using Task Space Regions (TSRs)

Motion Prediction in Autonomous Vehicles using a Neural Network Approach — *Mar 2022 – Aug 2022*
E-Mobility Competition
- Developed an FCN-Keras model utilizing vehicle trajectories captured from drone images of road intersections in Germany
- Optimized hyperparameters using Optuna and Bayesian methods to minimize displacement and heading errors
- Grade: 1,0 (Excellent– German Grading System)

COVID 19 Dynamic Dashboard Development — *Jan 2022 – Jun 2022*
Enterprise Data Science
- Built a COVID-19 dashboard in Python, following the industry-standard CRISP-DM methodology
- Integrated real-time data extraction via RESTful APIs and created interactive visualization using DASH and Plotly
- Grade: 1.0 (Excellent– German Grading System)

Arduino-based Automation of a 4-DOF Cylindrical Robot Arm — *Feb 2019 – Jul 2019*
Tectonic 2k19 (Annual Technical Exhibition)
- Developed a Prototype of 4-DOF cylindrical robot arm using Arduino for automating the loading & un-loading on CNC-Machines
- Programmed Pick-and-Place operations using Embedded C++ for precise control of servomotors and the end effector