

Summary

A competent **Software Development Engineer** with **5 years of experience** in building cloud applications at **Zoho Corporation** and an academic background in **Mechanical Engineering from SASTRA University**. Currently pursuing **Masters of Science in Engineering Science(Robotics) at University at Buffalo, The State University of New York** with a zeal to excel in **Robot Perception and Planning** . A detail-oriented, performance-driven, organized professional with great situational strength, productive even under pressure. An approachable genial team player, able to collaborate seamlessly, heeding constructive criticism. An ardent learner and organized individual with outstanding time and project management skills.

Technical Skills

- **Programming Languages:** Java, C, C++, Python, Go, HTML, SQL, JavaScript, Java Server Pages(JSP)
- **Tools and Frameworks:** REST, Agile, Waterfall, Microsoft Word, Excel, PowerPoint, Outlook, Linux, Git, Mercurial, MySql, PostgreSQL, Kafka, Docker, gRPC, Protobuf, Apache Lucene, Elasticsearch, Github, Gitlab, Bitbucket, Sourcetree, SolidWorks, CATIA, Pro-E, ANSYS, LS-Dyna, ROS, rospy, Simulink, MATLAB, LaTeX
- **Language:** Tamil, Telugu, Hindi, German

Experience

Member Technical Staff (Software Development Engineer), Zoho Corporation, Chennai, Tamil Nadu, India September 2018 - August 2023

- Worked in the core development of a new cloud product (Cloud Repository Management System) which involved building the entire service from scratch - competitor analysis, new feature implementation, server provisioning and monitoring, security, product demos, orientations, etc.
- Designed and implemented code, database and document structure for search indexing to provide content search assist for repositories such that the **results are obtained within 40 ms**
- Implemented **on-the-fly code intelligence** for repositories with multiple programming languages incorporating database design, index template design, and multilingual code, using docker containers and provisioning dedicated microservices
- Designed and built a database architecture to reduce data redundancy by saving only updates, **reducing the data stored by more than 70%**
- Designed and implemented code to run background processes in docker containers to scale and avoid unnecessary load on the application servers, reducing the server crashes to 0
- Modified code to limit time, space and code complexities, solving performance and memory leak issues, improving **code efficiency by about 40%**, demonstrating efficient problem-solving and analytical-thinking skills
- Monitored and solved security issues, thwarting threats and sealing network calls through specified norms for cloud software and made patches and fixes to maintain and provide a seamless functioning
- Automated and triggered schedules to run pipelines for heavy-duty repository processes(like merges and posthook actions) asynchronous from the user actions, **reducing response time by 60%** for remote repository operations, using schedules and kafka queues
- Developed and integrated polyglot services through gRPC and protobuf to increase efficiency and maintain compatibility. Using polyglot services and separate services **decreased the maximum response time by more than 200%**
- Created product and API documentation and technical documentation for better peer collaboration and conducted sessions for product induction
- Conducted product demonstrations, peer orientations and technical presentations for knowledge transfer on features and integrations

Intern, Turbo Energy Private Limited (TEL), Chennai, Tamil Nadu, India December 2016

- Pursued Internship Training at Turbo Energy Pvt. Ltd. for 2 weeks, studying turbocharger production, assembly, functioning and safety inspections
- Witnessed the operation of balancing machine and safety examinations like oil leak test, balancing test, weight analysis and internal pressure test

Intern, Integral Coach Factory (ICF), Chennai, Tamil Nadu, India June 2016

- Interned at the Integral Coach Factory for two weeks exploring various departments: Design, Production & Manufacturing, Welding and Furnishing
- Programmed CNC tasks for profile cutting and drilling
- Learnt about the history of ICF and gained practical knowledge on the manufacture and assembly of coaches through professional guidance
- Examined and researched on the design and use of components found in coaches such as air brakes, coil suspension, and bogie frames

Education

- **Master of Science in Engineering Science: Robotics, University at Buffalo, The State University of New York, Expected: December 2024**
- **B.Tech: Mechanical Engineering, SASTRA Deemed University, (GPA 7.96/10), May 2018**

Academic Projects

Senior Undergraduate Year Project: Side Crash Analysis of a Tubular Frame May 2018

- **Side Pole Impact Test** to determine the **crashworthiness of a tubular vehicle frame** using CATIA and LS-Dyna
- Proposed and **simulated the decrease in frame deformation** by introducing a woven flax-epoxy composite side structure that **absorbs part of the crash energy** thus protecting the passenger cabin
- Documentation of the impact parameters and the level of deformation and energy absorbed, with and without the composite side structure

SASTRA Racing Team June 2015 - December 2016

Part of the **SASTRA SAE**(Society of Automotive Engineers) **Collegiate Club** and a member of the **SASTRA Racing Team(Transmission Team)**, building and testing an off-road buggy to compete in the endurance racing event: **BAJA SAEINDIA 2016**

Responsibilities And Activities:

- Research and selection of a suitable differential, calculation of output(torque, speed and power) stats and computation of maximum gradability
- Creating a digital model of the differential casing using SolidWorks and incorporating the engine in the vehicle
- Documentation of parts used, performance and analysis reports
- Fabrication, Building and testing the vehicle, tuning the engine and making repairs for better performance

Positions of Responsibility

- **Scout Captain**, Sindhi Model School, Chennai, Tamil Nadu, India June 2011 - May 2012
 - As a scout, participated in several community services and donations, and commanded troops during camps as the scout captain
- **School Pupil Leader**, Sindhi Model School, Chennai, Tamil Nadu, India June 2013 - May 2014
 - Led the organizing committee and represented the school in various occasions, excelling in public speaking, team-building, problem-solving and also served as the Master of Ceremony on several occasions
- **Member of the SASTRA Racing Team**, SASTRA University, Thanjavur, Tamil Nadu, India June 2015 - December 2016
- **Member of Events**, Tech Fest, SASTRA University, Thanjavur, Tamil Nadu, India June 2016 - May 2018
- **Head of Marketing & Shows**, Tech Fest, SASTRA University, Thanjavur, Tamil Nadu, India June 2017 - May 2018
 - Led a team of 30, acquiring funding and sponsors, marketing the Fest and its events, planning and organizing shows and events, demonstrating leadership, problem-solving skills and out-of-the-box thinking
- **Active participant in Entrepreneurship Development Cell**, SASTRA University, Thanjavur, Tamil Nadu, India June 2017 - May 2018
 - Participated in several idea presentations and entrepreneurship events, showcasing new technical, business ideas and teamwork