# ABHISHEK SRIRAM

+1(508) 907-0036 ◇ Boston, MA ◇ sriram.ab@northeastern.edu ◇ Linkedin ◇ GitHub ◇ GitLab ◇ Medium

## EDUCATION

**Master of Science in Robotics**, Northeastern University, MA, USA — Expected May 2025
*Coursework*: Computer Vision, Supervised Machine Learning, Robot Sensing and Navigation, Robot Mechanics and Control

**Bachelor of Engineering in Mechanical Engineering**, Anna University, TN, India — April 2023
*Coursework*: Mechatronics, Robotics, Computer-Aided Drawing, Fluid Mechanics, Thermodynamics, Finite Element Analysis, Unconventional Machining Process, Introduction to Python

## SKILLS

| | |
|---|---|
| **Programming & Database** | C/C++, Java, Python, R, Bash, PostgreSQL |
| **Library & Framework** | Spring MVC, Next.js, Express.js, OpenCV, ROS, NumPy, Matplotlib |
| **Tools & CAD** | Jupyter Notebook, Git, IntelliJ IDEA, Figma, Microsoft Excel, SolidWorks |

## EXPERIENCE

**Member of Technical Staff** | *Spring MVC, PostgreSQL, JavaScript, Apache Ant* — Jan 2023 - Aug 2023
Zoho Corporation — *TN, India*

- Worked on a proof of concept to translate custom fields into the CRM product, which is strategically aimed at cutting down translation costs significantly by 5%, leading to potential cost savings for the users
- Achieved a significant average translation accuracy of 92% using Zoho's Natural Language Processing API, and minimized network calls by 60ms by communicating with API team to resolve issues, ensuring quality, reliability and demonstrating the ability to solve challenging problems in full-stack software
- Learned Java EE Technologies - Struts, Servlets, Spring MVC and other technologies in Java ecosystem and developed a full-stack application using Spring MVC, Zoho in-house JavaScript framework (Lyte) and PostgreSQL

## PROJECTS

**IoT Enabled 6DOF Robotic Arm** | *ATmega2560, ESP-IDF, C++, JavaScript, SolidWorks, Postman*

- Utilized IoT (REST API) as the communication protocol to interact with environment by exhibiting a broad understanding of modern approaches to industrial robotic automation
- Designed and developed the 6DOF robotic arm using aluminum brackets and servo motor data sheet in SolidWorks
- Demonstrated the ability to build tools and intuitive interfaces for development of diverse robotic capabilities by implementing inverse kinematic(DH) algorithm from research paper in C++ and built user-interface using web technologies (HTML, CSS, JavaScript)

**Canny Edge Detection and Sobel Filter - Classical vs OpenCV** | *Python, NumPy, Matplotlib, SciPy*

- Implemented edge detection filters from scratch in Python and optimized memory usage by 1.5-2% than OpenCV's built-in functions
- Authored a Medium article discussing the implementation and comparison by demonstrating written communication skills

**RTAB-SLAM Comparison in TurtleBot3 and RTAB-Map App** | *ROS, C++, 2D LiDAR, SLAM, TurtleBot*

- Worked in a team of 4 members, implemented motion and task planning using RTAB SLAM on a TurtleBot 3 Burger using 2D LiDAR
- Analyzed and validated data from the RTAB-Map app with 96% accuracy in well-lit environments; compared the datasets and documented them in report

## PUBLICATIONS

Sriram, Abhishek, et al. **"IoT-Enabled 6DOF Robotic Arm with Inverse Kinematic Control: Design and Implementation."** *2023 IEEE World Conference on Applied Intelligence and Computing (AIC), IEEE, 2023, pp. 795–800* (IEEE)