

Sharini Rithigaa Baranisrinivasan Sumalatha

A passionate engineer with over 3 years of experience in software engineering, committed to continuous learning and excellence in the field.

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SKILLS

Languages: Java, [Python](#), JavaScript/TypeScript, HTML, CSS

Tools & Libraries: React, [Jenkins](#), UiPath, Selenium, [GitHub](#), Jira, Postman, REST APIs, Flask, and Fast APIs

Development: [Full-Stack Development](#), [Automated Test Suites](#), Chatbot Development, GenAI

Databases and Storage: Relational Databases ([MySQL](#)), [MongoDB](#),

Testing: Manual and Automated Testing, API Testing, Integration Testing, Database Testing, Unit Testing, End-to-End Testing, Performance Testing, Test Case Design, Execution, Defect Tracking

Cloud and Deployment: [Azure Cognitive Services](#), Docker containerization, CI/CD Pipelines, [Heroku](#)

Methodologies: [Agile](#), Scrum, Software Development Lifecycle (SDLC), Project Management, Ethical AI Practices

Other: Collaborative problem-solving, Analytical thinking, Strong communication skills, flexible

PROFESSIONAL EXPERIENCE

Full Stack Developer Intern at Smart Digital Systems, Ottawa

Sep 2024 – Dec 2024

- Developed advanced medical chatbots using GPT-4 and Multi-Headed RAG for real-time, accurate responses using [Python](#).
- Designed a scalable data retrieval system with MedlinePlus API, [LangChain](#), [OpenAI](#), and [ChromaDB](#), achieving 98% query relevancy.
- Integrated voice-to-text capabilities, enhancing hands-free chatbot interactions and accessibility.
- Built a voice-enabled appointment system, reducing booking errors by 40% and handling 100+ concurrent users.
- Optimized vector embeddings retrieval using [MongoDB](#), achieving an average response time of 2.8 seconds.
- Achieved sub-3-second response times with multithreaded query handling and FAISS for vector similarity searches.
- Developed secure backend systems integrating external APIs, with data stored and retrieved via [MySQL](#).
- Enhanced an existing [React.js](#) frontend and integrated it with a [Python](#) and Node.js backend via [Flask APIs](#) and Express APIs.
- Conducted [unit](#), [API](#), [database](#), and [integration testing](#), achieving a 100% success rate across 20+ test cases.
- Deployed applications via [Heroku](#), utilizing Heroku CLI for monitoring logs and resolving runtime errors.

Packaged App Development Analyst (QA & Test Automation) at Accenture Solutions, India

Jul 2021 – Aug 2023

- Analyzed business requirements to devise automation test strategies, developing 800+ test cases with a 90% automation rate.
- Implemented [Selenium](#) Test Environment Setup ([Maven Integration](#), [Java](#), [TestNG](#), and [Jenkins Integration](#)) and API integration for data retrieval
- Built end-to-end automation solutions using [UiPath](#) Studio for efficient test execution with a success rate of up to 90%.
- Identified 200+ defects in the Citrix application and Web application, and logged them in [Jira](#).
- Conducted 100+ regressions, managed 150+ User Stories for optimal product performance, and delivered high-quality testing.
- Led automated test suite, reducing testing time by 50% and increasing coverage by 75% contributing to enhanced product quality.
- Maintained test scripts, conducted code reviews, and managed [GIT repositories](#), generating QA reports and deliverables.

Web Development Intern at Neyveli Lignite Corporation (NLC), India

Dec 2019 – Mar 2020

- Designed and customized internal web applications using [HTML](#), [CSS](#), and [JavaScript](#), ensuring alignment with organizational standards.
- Assisted in managing and optimizing content for internal systems and portals.
- Collaborated with the IT team to troubleshoot and resolve website functionality issues.
- Implemented automated testing with [Selenium](#) and [TestNG](#) to ensure code quality.
- Managed version control using Git, contributing to seamless team collaboration.

TEACHNICAL LEADERSHIP & PROJECT MANAGEMENT EXPERIENCE

Teaching Assistant at University of Ottawa

Data Science for Biomedical Engineers

Jan 2025 – April 2025

- Led and mentored 15+ student project teams, ensuring timely delivery of high-quality work.
- Provided technical support and guidance, resolving the reported development errors, deployment, and tool configuration issues.
- Assisted teams in defining their tech stack and development environments, optimizing workflows for efficiency and scalability.
- Facilitated the integration of 5+ standalone applications into the project's GitHub codebase, ensuring seamless collaboration and version control.
- Streamlined the deployment process via Heroku, and improved project accessibility.
- Organized and led weekly Agile sprints and retrospectives, enhancing team productivity and aligning deliverables with project goals.

Software Requirements Analysis

Sep 2024 – Dec 2024

- Guided course projects, ensuring alignment with academic standards.
- Graded assignments, labs, and projects, offering constructive feedback to improve technical and analytical skills.
- Responded to student queries, providing academic support on requirements gathering, documentation, and modeling techniques.
- Collaborated with the course instructor to develop lab exercises, project guidelines, and evaluation criteria.

PROJECTS & RELATED WORKS

• Research Assistant for One Door Project – Chatbot Development, University of Ottawa

- Developed a chatbot for the Student Health Centre using Azure Cognitive Services (Blob Storage, Custom Entity Lookup, Custom Question Answering, CLU) and GPT-4. Built backend systems in Python, integrating internal APIs and databases for real-time, accurate responses.

• Test Automation Volunteer Student, University of Ottawa

- Assisting with test plans and execution for the testing of the ICanBeWell App. Developing automated test suites using Cypress for end-to-end regression testing.

• Automated Test Frameworks to test a Job search engine website using Selenium and PyTest (2024)

- Developed automated test frameworks for the SimplyHired website using Selenium WebDriver for UI testing, PyTest for test orchestration, and integrated with GitHub and Jenkins for version control and continuous integration (2024).

• Automated test script development to test my self-created portfolio using Selenium and TestNG Frameworks (2024)

- Developed an automated testing suite for a self-created portfolio website using Selenium WebDriver, TestNG, Apache POI, and AventStack ExtentReports in Java, achieving 100% test coverage and zero defects across 50 test cases.

• Creating my Portfolio website using HTML, CSS, and JavaScript. (2024)

- A personal website created using HTML, CSS, and JavaScript and hosted on GitHub Pages. It features dynamic interactions and a responsive design to enhance user experience.

• Book Recommender Chatbot System using Machine Learning Algorithms and DialogFlow (2024)

- Designed a Chatbot using Flask, NLP models, and Dialogflow, enabling personalized book recommendations via advanced NLP techniques for streamlined user interaction and book selection.

EDUCATION

• Master of Engineering – Electrical and Computer Engineering at University of Ottawa

Sep 2023 – Apr 2025

- Relevant Coursework: Data Science Application, Industry Internship Project, Software Defined Networks

• B.Tech – Electrical and Electronics Engineering at Pondicherry Engineering College

Aug 2017 – Jun 2021

- Relevant Coursework: Computer Programming, Data Structures and Object-Oriented Programming

CERTIFICATES, AWARDS & ACHIEVEMENTS:

- CDART: Diploma in Multilingual Computer Programming (C, C++, Java)
- UiPath Academy: Diploma in Robotic Process Automation Foundations
- Udemy: Docker for Test Automation Masterclass (Beginner to Advanced)