

# Sharmila Rapeti

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## Education

### NIT Silchar

Expected May 2026

Bachelor of Electronics & Communication Engineering

Silchar, Assam

- Relevant Coursework: Data Structures and Algorithms (C++) , Prob & Stat, Machine Learning

## Experience

### SN Bose Summer Internship

Jun 2025 – Aug 2025

Summer Research Intern - ML/AI

Silchar, Assam

- **Responsibility:** Enhance underwater image quality for marine datasets using DL frameworks.
- **Challenge:** To build a hybrid CNN-GNN model to optimize results of CNN models.
- **Result:** Built MARLINet pipeline achieving **30% SSIM** and **5.1% PSNR** improvement over baseline on 890 images.
- **Tech Stack:** Python, PyTorch, OpenCV, NumPy, Matplotlib

### SERB CRG

Jun 2025 – Aug 2025

Summer Research Intern - DL

Silchar, Assam

- **Responsibility:** Develop a RIS phase control system for 6G D2D networks.
- **Challenge:** Improved knowledge in **vision-assisted RIS** systems and simulation pipelines.
- **Action:** Built CNN-based predictor achieving **20% accuracy gain**, developed a synthetic scene,label extraction,inference,evaluation workflow.
- **Tech Stack:** Python, PyTorch, NumPy, OpenCV, MATLAB (possible for simulation), custom simulation frameworks

## Projects

### [campusGPT](#) | GitHub Repo | Go + Python AI pipelines, RAG, LangChain agents, React.js

- **Responsibility:** Building an AI-driven campus productivity assistant that automates resume tailoring, assignment extraction, college workflows, and student-facing utilities.
- **Challenge:** Designing multi-agent systems that handle document parsing, intent detection, and workflow automation efficiently.
- **Learning:** Implementing real-time chat interface, Git auto-sync for project folder activity, and AI task automation.

### [Quick CV \(MERN Stack\)](#) | GitHub Repo | MongoDB, Express.js, React.js, Node.js, RapidAPI, JWT Auth

- **Responsibility:** Designed and developed a full-stack web platform for creating, customizing, and downloading professional resumes.
- **Challenge:** Implemented real-time editing with instant preview, LinkedIn data scraping, and multiple dynamic templates while ensuring secure authentication and storage.
- **Learning:** Enhanced skills in **MERN stack development**, REST API integration, authentication workflows (JWT + cookies), and UI/UX design for productivity tools.

### [React.js Chatbot Portfolio](#) | GitHub Repo | Live Demo | React.js, Tailwind CSS, Vercel, GitHub

- **Action:** Developed an interactive, responsive chatbot-style portfolio to dynamically showcase projects and skills, deployed on **Vercel**.
- **Challenge:** Engineered a modular chat pipeline using **React hooks/context**, caching mechanisms, and accessibility compliance.
- **Result:** Improved user experience and reduced component rendering overhead by designing reusable UI components and optimized state management.

## Technical Skills

**Coding profiles:** Solved 300+ on leetcode and GFG.

- Got selected and contributed to open source through [GSSoC 25 Contributor](#).
- Participated in hackathons including SheCodes, Flipkart Grid '24/'25, Walmart Sparkathon, Adobe India, CodeHer.

**Programming Languages:** C++, Python, HTML, CSS, Javascript

**Machine Learning AI:** Pandas, NumPy, Matplotlib, Seaborn, Jupyter Notebook, OpenCV, scikit-learn, PyTorch, Neural Networks, Image Processing, Computer Vision

**Databases & version control:** MySQL, PostgreSQL, MongoDB-Mongoose, Git, Github, Vercel, MERN SQL Profile

**Core Concepts:** Data Structures & Algorithms (DSA), Object-Oriented Programming (OOP), DBMS