

# PRANAV DANI

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## EDUCATION

### SUNY – Stony Brook University

Master of Science, Computer Science

Aug 2023 - May 2025

New York, USA

- Coursework: Distributed Systems, Operating Systems, Computer Architecture, Theory of Databases, System Security
- Teaching Assistant: (CSE - 316) Fundamentals of Software Development

### University of Mumbai – Thadomal Shahani Engineering College

Bachelor of Engineering, Information Technology

Aug 2019 - May 2023

Mumbai, India

- Courses: Operating Systems, Database Management, Data Structure and Analysis, Computer Network And Network Design, Network Security, Computer Organization and Architecture, Data Mining and Business Intelligence

## SKILLS

**Languages and Frameworks:** C, C++, Python, Java, Go, React.js, Node.js (Express.js), Flask, HTML, CSS, JS

**Technologies:** Git, Figma, GitHub Actions, PostgreSQL, Hadoop, Spark, Firebase, Heroku

## EXPERIENCE

### Suven Consultants

Software Intern

Jun 2021 – Aug 2021

Mumbai, India

- Collaborated on two Open Source Java projects: Home Inventory and Loan Management tool.
- Developed a feature using **Printable interface** to generate printable reports in PDF format using **Java AWT and Graphics Library**.
- Used SQLite3, JavaFX, and Java Swing components.

## PROJECTS AND RESEARCH

### Fault Tolerant Sharded Key-Value Store With Transactions using [Raft](#) | C++

August 2023 – December 2023

- Developed a **persistent linearizable key-value store** utilizing the **Raft consensus algorithm** for leader election and data replication in an **asynchronous environment**. Implemented **log compaction** with **Snapshots**.
- Engineered **sharding** using **consistent hashing**, ensuring efficient data distribution across nodes. Automated **partition rebalancing** during node joins and departures.
- Implemented a **versioned key-value store** that supports **cross-shard Transactions** using **2-Phase Locking** and **2-Phase Commit** with **Optimistic Concurrency Control**.

### BackGen - Backend Generator | [ICT4SD](#) | [Springer](#)

August 2023

- Developed a software tool that **automates** the process of writing **backend code** for web applications.
- Creates a structure for data models and **RESTful API endpoints**, and generates executable code for the same in Golang.
- Generates approximately 48% of the code. (Result evaluated for creating a backend for a simple Todo application.)

### ShareSpace | [React.js](#), [Tailwind](#), [Firebase](#), [Figma](#), [Excalidraw](#) | [GitHub](#)

Feb 2023

- Developed a **web application** called ShareSpace to facilitate roommate search by leveraging Firebase as the backend and React.js for the frontend.
- Implemented an **intuitive user interface** using Tailwind CSS.
- Utilized React.js to create filters for room searches based on user profiles, groups, and personal preferences.

### Short-Terms | [NLP](#), [HTML](#), [CSS](#), [JS](#), [Python](#), [FastAPI](#), [Beautiful Soup](#) | [GitHub](#)

Jan 2022 – Apr 2022

- Designed and implemented a **browser extension** (Manifest 3.0) to **summarize website content** with a single click.
- Leveraged **Beautiful Soup** for efficient page parsing and utilized **FastAPI** to handle requests from the extension.
- Incorporated NLP techniques through **Spacy** to optimize text summaries while preserving essential meaning.

### Maa-Sampati Marble and Granites | [React.js](#), [CSS](#), [TypeScript](#), [Firebase](#), [Flutter](#) | [GitHub](#)

Jul 2021 – Oct 2021

- Architected an easy-to-use **E-commerce platform** for creating Granites and Marble quotations using React.js.
- Utilized REST APIs in the web app to interact with Firebase for storing orders.

### Expense Tracker | [Flask](#), [PostgreSQL](#), [Heroku](#), [HTML](#), [CSS](#), [JS](#) | [GitHub](#)

Apr 2021 – Jun 2021

- Designed and built a web app for recording and **managing personal expenses** with support for creating bulk expenses and **exporting user data in CSV and Excel formats** using Flask and PostgreSQL and hosted on Heroku.
- Provides the functionality to create **personalized budgets** based on multiple categories.

## EXTRACURRICULAR ACTIVITY

### Our Tech Community (OTC) | [ourtech.community](#) | Admin

May 2022 - present

- Hosted 200+ hours of weekly **OTC CatchUp** sessions, organized two in-person **OTC MeetUp** event with 60+ attendees.

### Google Developer Student Clubs TSEC | [Core Team Member](#)

Aug 2021 – Jul 2022

- Involved with organizing and planning multiple technical events and maintaining a community with over 500 students.