PRANAV DANI

9344519426 🌐 pranavdani.com 🖸 github.com/PranavDani 🛅 linkedin.com/in/pranav-dani 🗖 contact@pranavdani.com

EDUCATION

SUNY – Stony Brook University

Master of Science, Computer Science

• 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

 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, 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

- 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

Improving File System syscall performance on XV6 | *C*, *qemu*

- Engineered **asynchronous disk logging protocol**, enhancing the write efficiency, resulting in a **94% latency reduction**.
- Introduced small file support with file type conversion handling. Resulted in a reduction of 29% and 91% disk IO requests with unchanged logging and new logging protocol respectively.
- Added ftruncate() syscall for file truncation and seamless transition between "small" and regular files.

Fault Tolerant Sharded Key-Value Store With Transactions using Raft | C++ Aug 2023 - Dec 2023

- Created 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

- 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.)

Short-Terms | NLP, HTML, CSS, JS, Python, FastAPI, Beautiful Soup | GitHub

- 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

- 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

- 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

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

Jul 2021 - Oct 2021

Jan 2022 – Apr 2022

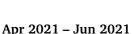
Aug 2019 - May 2023

Aug 2023 - May 2025

New York, USA

Mar 2024 - May 2024

Aug 2023



May 2022 - present

Mumbai, India

Jun 2021 – Aug 2021

Mumbai, India