# Dinesh T V

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## **EDUCATION**

## **PSG College of Technology**

Coimbatore, India

M.Sc Theoretical Computer Science CGPA: 8.30

Aug. 2022 - Present

#### **TECHNICAL SKILLS**

**Programming Languages:** C++, JavaScript, Python

Libraries and Tools: Git, Docker, Jira, Obsidian, Postman, Swagger, Kafka

Frameworks: ReactJS, NextJS, ExpressJS, NestJS

Databases: PostgreSQL, MongoDB, MySQL

#### **WORK EXPERIENCE**

# **Full-Stack Engineer**

Ven Softwares LLP

June - December 2024

- Worked as a fullstack developer on a B2B analytics application, utilizing ReactJS for frontend development and Spring for creating RESTful APIs on the backend.
- Implemented a custom **data visualization library** for business performance analytics and worked with **version control APIs for GitHub** to analyze code quality and employee performance.
- Played a critical role in **designing and developing the MVP**, contributing to both full-stack development and designing the **workflow pipeline** within the company, along with leading the frontend developer team.

#### NON-ACADEMIC PROJECTS

- Darpanet Comprehensive event management solution built with NestJS.
  - A comprehensive solution for **college festivals**, **integrating user registration**, **team management and detailed statistics** through a unified backend, handling about 1000+ concurrent users.
  - Major contribution to backend development with NestJS, creating RESTful APIs, **managing Redis queues** for **efficient asynchronous processing** and **MinIO buckets** for **static storage**.
  - Ensured smooth **real-time updates** for leaderboards and event data, using websockets.
- ProLeap Web application for mentor sessions and surveys, built with ReactJS and Django REST frameworks.
  - Created a web application to move mentor sessions from Google Forms to a website.
  - Student activity is **saved in real time** thereby enabling **sessions restores**.
  - Activities can be monitored in real time using an admin view and a live polling system based on websockets.

## **ACADEMIC PROJECTS**

- Mozart An integrated music tracker and player built with NextJS, NestJS and PostgreSQL.
  - A full-stack web app built with NextJS and NestJS, offering insights into user listening trends on Spotify through **personalized reports**.
  - Integrates a **custom weighted KNN model** to recommend songs based on historical listening data, enhancing user experience.
  - Tracks and analyzes listening history, offering **comprehensive reports** based on **different time frames**.
- BloomSync Command-line interface application built for file synchronization for UNIX systems using Python.
  - Provides **seamless file synchronization** between two directories.
  - File verification is done using the **Bloom filter** data structure ensuring minimal computations and keeping false positive rates less than 0.1%.
  - Comes with a custom **CLI tool** that installs the application and configures the directories, along with setting up a **cron job** for synchronization.
- Wizardo Password manager written in C++ and .NET.
  - Provides a GUI for **generating and retrieving passwords** locally, thereby enabling **centralized storage** of credentials.
  - Passwords are encrypted using **SHA-256** and stored on the system, along with a feature to **modify encryption protocols** and parameters in advanced use cases.