JAYKUMAR BHUVA

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EDUCATION

B.Tech in Information Technology, **Dharmsinh Desai University**   **Nadiad, Gujarat**
CPI : 8.8   *2021 - 2025*

TECHNICAL SKILLS

Programming Languages : JavaScript, Java, C++, Python
Databases : MySQL, PostgreSQL, MongoDB, Convex
Technologies/Frameworks : React.js, Flask, Node.js, SpringBoot, Hibernate, AJAX, Next.js
Developer Tools : Git, Postman

WORK EXPERIENCE

Research Intern | Hydrology Department
Space Application Centre-ISRO, Ahemdabad, Gujarat   *December 2024 – March 2025*

- Built end-to-end **Python** pipelines for river discharge estimation using **satellite-derived data**, applying a **modified Manning's equation** to automate hydrological computations.
- Processed and visualized large-scale geospatial and time-series datasets (**shapefiles**, **NetCDF**, **CSV**) using **Pandas**, **NumPy**, **xarray**, **Matplotlib**, and **geopandas**.
- Applied statistical methods including **RMSE** and **KGE** to validate outputs against in-situ data, contributing to data-driven decision making.
- Automated data matching and reach-wise correlation using **Python scripting**, focusing on reproducibility and efficiency.

PROJECTS-PUBLICATION

InterviewEdge: AI-based Interview Assistant (IEEE Research Paper)

- Technologies used: **React.js, Flask, Python, LangChain, RAG, LLaMA Model, ChromaDB**
- Co-developed an AI-powered interview assistant **to analyze spoken technical responses** (Java, C++, C) and **provide automated feedback** on accuracy, completeness, and clarity.
- Engineered back-end infrastructure to support model inference and integrated **Retrieval-Augmented Generation (RAG)** using **LLaMA 3.2-3B-Instruct**, improving consistency of the evaluation and reducing bias.
- Optimized recruitment assessment processes, improving candidate readiness evaluation accuracy by **76.71**. (GitHub)

BillBuddies – AI-Powered Expense Management System

- Technologies used: **Next.js, React.js, Convex, Gemini (GoogleAI)**
- Built a full-stack real-time expense manager to dynamically **split individual and group expenses** (equal, percentage, or custom) with debt minimization logic.
- Integrated **Gemini AI** to generate personalized insights and monthly expense summaries; automated reminders via **Inngest** and **Resend**. (Live Demo)

TeamTrack – Effortless Employee Management

- Technologies used: **Java Spring Boot, React.js, MySQL, Tailwind CSS**
- Built a **full-stack employee management system** enabling seamless creation, editing, and deletion of employee profiles for company administrators using **React.js**, **Spring Boot**, and **MySQL**.
- Designed a **modern and responsive UI** using **Tailwind CSS**, ensuring a **intuitive user experience** for easy management of employees. (GitHub)

CERTIFICATIONS

- AWS Academy Graduate - AWS Academy Cloud Foundations   View Badge
- AWS Academy Graduate - AWS Academy Machine Learning Foundations   View Badge
- Stanford University and DeepLearning.AI - Supervised Machine Learning   View Certificate
- Stanford University and DeepLearning.AI - Advanced Learning Algorithms   View Certificate