

# AKASH JAIN

Bhopal, India

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## EDUCATION

### UIT RGPV University, Bhopal

B.Tech - Computer Science and Engineering - **CGPA - 7.4**

**Aug 2022 – June 2026**

Bhopal, India

### Gyanodaya SMVM, Khurai

Class XII (CBSE) — Science (Mathematics, Computer Science) - **Percentage - 93**

**Apr 2020 – June 2021**

Khurai, India

## EXPERIENCE

### Technical Writer (Engineering)

**Jan 2026 – Present**

TakoVibe

Remote

- Authored first-principles engineering content focused on **FastAPI** and modern **Python backend architecture**.
- Explained limitations of synchronous frameworks and the role of **ASGI** and async execution.
- Emphasized execution models, type-driven design, validation, and architectural trade-offs over tutorials.

### Software Engineering Project — Bookshelf Application

**Jan 2026 - Feb 2026**

Independent

Remote

- Developed a full-stack bookshelf application with **React 19**, Vite, **Django 5.0**, and **PostgreSQL 15** for library management.
- Implemented **JWT authentication**, search/filter functionality, **Google Books API integration**, and **RESTful** endpoints with ViewSets and Serializers.
- Containerized with **Docker** and docker-compose, featuring health checks, database migrations, and modern Python tooling (**uv**).

## PROJECTS

### Connect4 – Game Server ↗ | Reactjs, FastAPI, MongoDB, and WebSocket

**2025**

- Built real-time Connect4 server using FastAPI WebSockets with full game logic and winner detection.
- Designed scalable MongoDB backend with async Motor WebSocket updates for concurrent players.
- Reached 100% test coverage via 40+ Pytest cases for logic, validation, and state management.

### Premium Predictor ML API ↗ | FastAPI, Streamlit, Scikit-learn, Docker, AWS EC2

**2026**

- Built ML classification API with FastAPI and Scikit-learn to predict insurance premium categories, automating feature engineering for BMI, risk scores, and city tiers.
- Designed asynchronous RESTful API with Pydantic validation, delivering real-time predictions with confidence scores and probability distributions.
- Deployed Dockerized application on AWS EC2 with health monitoring and developed Streamlit frontend for instant user predictions.

### AI Tech Explainer with Persona-Driven Dialogues ↗ | Reactjs, Flask, SQLite, Google Gemini **2024**

- Integrated Google Gemini 2.5 Flash via Flask, utilizing dynamic prompt engineering to transform technical concepts into persona-driven dialogues.
- Implemented a look-aside caching strategy using SQLite and SQLAlchemy, reducing API overhead by retrieving repeated queries from local persistence.

### GMNX - Command-line Assistant ↗ | Docker, Python, Google Gemini,

**2025**

- CLI assistant powered by Google Gemini API for instant help and code snippets.
- Runs via Docker with zero setup; supports persistent alias for quick use.
- Containerized and secure: API keys passed at runtime; consistent experience across platforms.

## TECHNICAL SKILLS

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

**Frontend:** React, Redux, HTML, CSS, TailwindCSS, Vite

**Backend:** Django, FastAPI, Flask, Pydantic, Node.js, Express.js

**API & Communication:** REST APIs, WebSockets, RabbitMQ, JWT

**Databases & Caching:** MongoDB, MySQL, PostgreSQL, SQLite, Redis, Mongoose

**Cloud & DevOps:** Docker, AWS EC2, Vercel, Render, Streamlit, Prometheus, GitHub Actions

**Development Tools:** Git/GitHub, Linux, Axios, npm, pnpm, Bun

**Testing & Quality:** Pytest, Postman

**Architecture:** Microservices Architecture

**Problem Solving:** 300+ problems solved across LeetCode, CodeForces, GeeksforGeeks, and CSES