

# Ansh Agarwal

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## EDUCATION

**Vellore Institute of Technology, Bhopal**

*B.Tech in Computer Science & Engineering*

*Sept 2022 – June 2026*

*CGPA: 8.93/10*

## TECHNICAL SKILLS

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

**Frontend & Mobile:** React, Flutter, HTML, CSS, Tailwind CSS, Android Studio

**Backend & Databases:** REST APIs, Firebase, MySQL, MongoDB, AWS (EC2, S3), Git

**AI/ML & Visualization:** TensorFlow, Scikit-learn, Numpy, PyTorch, SpaCy, Plotly, Tableau, PowerBI

## PROJECTS

### Aqua Sense AI – Water Quality Monitoring Dashboard

[Link](#)

*Python, ARIMA, Firebase, Tableau, Plotly, Chart.js, React, TypeScript, Tailwind CSS*

- Built a real-time dashboard to track **9+ parameters** (pH, DO, BOD, etc.) across 44+ stations in 28 states, automating the calculation of the NSF Water Quality Index (WQI) for immediate insights.
- Developed an **ARIMA (5,1,0)** forecasting model to predict WQI trends 15 years into the future with **92% accuracy**, enabling proactive environmental management.
- Engineered features for geographic visualization, AI-powered anomaly detection, and seamless integration with Tableau to validate and surface trends from diverse data flows (CSV).

### PrepWell – AI Mock Interview

[Link](#)

*Firebase, Tailwind CSS, TypeScript, shadcn/ui, Vapi AI (voice), Google Gemini API*

- Engineered a voice-enabled mock interview platform using **Vapi AI** and **Google Gemini** to conduct adaptive, role-specific practice sessions and generate real-time questions.
- Developed an automated feedback system that provides structured evaluations with category-based scores, saved transcripts, and actionable improvement strategies.
- Validated system performance by simulating **50+** diverse user scenarios and enabled users to manage their interview history for targeted practice.

### QuizCrafter – Advanced MCQ Generator Using GENAI

[Link](#)

*Python, React, TypeScript, Gemini API, SpaCy, BeautifulSoup, pdfkit*

- Developed an AI-driven platform that reduces quiz creation time by 80% by automating the generation of **3-50 questions** with **3-6 answer options**, multi-answer support, and creativity controls.
- Extended functionality by integrating **web scraping** to parse articles and generate MCQs directly from URLs, expanding data source flexibility.
- Designed a **one-click PDF export** system with an answer key to produce printable study guides.

## CERTIFICATIONS

- **GenAI using IBM watsonx** — IBM, Apr 2025: prompt engineering, model deployment (virtual hands-on).
- **MongoDB Developer Path** — MongoDB, Jul 2025: schema design, indexing, and performance tuning.
- **Saviynt Identity Security for AI Age** — Saviynt, Aug 2025: identity security for AI; *8 CPE hours*.

## ACHIEVEMENTS & EXTRACURRICULAR

- **Semi-Finalist, Flipkart GRiD 7.0:** Advanced to Round 3, led a 3-member team among 160k+ participants.
- **Walmart Global Tech Sparkathon:** Contributed to an open innovation challenge focused on developing technological solutions for global retail challenges.
- **LeetCode:** Solved 490+ DSA problems, achieved MySQL Badge, contest rating-1459. - **LeetCode Profile** .
- **Core Member of Microsoft Technical Club, VIT Bhopal:** Actively participated in club activities, technical workshops and coding events.