Abhyuday Vaish

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EDUCATION

Vellore Institute of Technology   Chennai, India
Bachelor of Technology in Computer Science (CGPA: 9.01)   *July 2024 – May 2028*

EXPERIENCE

Research Intern   Feb 2026 – Present
IIT BHU   *Varanasi, India*

- Developing deep learning models for real-world datasets; prototyping and evaluating architectures with research scholars.

AI/ML Development Intern   Aug 2025 – Oct 2025
Daira EdTech   *Chennai, India*

- Automated the ingestion and enrichment of 100k+ UPSC PYQs to build the platform's core dataset.
- Architected a RAG system to transform static study materials into dynamic, on-demand practice assessments.
- Drove 40% user engagement growth by implementing advanced AI features using OpenAI and OpenCV.

Summer Research Intern   May 2025 – July 2025
Vellore Institute of Technology   *Chennai, India*

- Pioneered a framework for opponent profiling by integrating Stockfish with Chess.com APIs (89.5% detection rate).
- Fine-tuned a Gemma-2B model to generate automated PGN counter-strategies with an 81.6% success rate.
- Engineered a pipeline to analyze 2,500+ games, distilling exploitable tactical patterns and vulnerabilities.

PROJECTS

Solar CME Detection System | *Python, Flask, TensorFlow, PostgreSQL*   Jan 2026 – Present

- Designed a deep learning LSTM model to forecast solar wind parameters and detect CMEs using historical data.
- Engineered an ETL pipeline to ingest scientific CDF data from SWIS-ISSDC and validate against SIDC catalogs.
- Built a secure Flask dashboard enabling researchers to visualize space weather trends and trigger retraining.

Aadhar Analytics Engine | *Python, Pandas, Plotly*   Jan 2026

- Built a *Migration Radar* analyzing ∼5M transactions to correlate address changes with fresh enrolments.
- Designed a resource optimization model to classify districts by saturation density, redirecting inventory effectively.
- Implemented fraud detection using Z-Scores to flag volume spikes ($Z > 3$) and identify operational anomalies.

AI Academic Assistant | *FastAPI, Next.js, Supabase, RAG, Vector DB*   June 2025 – Present

- Architected a RAG-based platform retrieving context from student notes to deliver syllabus-aligned content.
- Engineered pipelines for automated notes summarization and custom question paper generation.
- Developed a full-stack Next.js solution to consolidate study materials and reduce student revision time.

WellNest | *Flask, TensorFlow, SQLAlchemy, Google APIs*   Jan 2025 – Feb 2025

- Designed an encrypted, AI-driven platform identifying mental health risks via anonymous surveys (100+ users).
- Built with Flask & TensorFlow, achieving 95% accuracy in risk ID and boosting support uptake by 40%.

TECHNICAL SKILLS

Languages: Python, C/C++, Java, SQL (Postgres), HTML/CSS/JS, MATLAB
Frameworks: Flask, FastAPI, PyTorch, TensorFlow, LangChain, HuggingFace, Scikit-learn, OpenCV
Tools: Git, Docker, Google Cloud Platform, Render, VS Code, Linux/Bash

AWARDS & ACHIEVEMENTS

- **1st Place**, Industry-Academia Innovators Conclave (IAIC 2025): Research Poster Presentation Category.
- **Global Rank 834** in CodeChef Starters 222 (Max Rating 1400+).
- **Max Ratings:** LeetCode (1600+), Codeforces (1100+).

POSITIONS OF RESPONSIBILITY

Microsoft Innovations Club (MIC), VIT Chennai   Chennai, India
Project Lead | AI/ML Team Member   *Sep 2024 – Present*

- **Project Lead (Jan 2026 – Present):** Leading a team of 7 on the "AI Academic Assistant" project; conducting code reviews, overseeing deployment, and mentoring juniors on GenAI workflows.
- **AI/ML Member:** Organizing club workshops and collaborating with the AI/ML team on Kaggle competitions and technical projects since joining in Sep 2024.

Data Science Member   Sep 2025 – Present
Google Developer Groups (GDG), VIT Chennai   *Chennai, India*

- Collaborating on data science projects, discussing ideas, and exploring new technologies with the community.