Abhinav Kumar Singh

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EDUCATION

Bharati Vidyapeeth's College of Engineering   *New Delhi, India*
Bachelor of Technology in Information Technology – CGPA: 8.43   *2022 – 2026*

- **Relevant Courses**: *Object-Oriented Programming, Database Management Systems, Software Engineering, Operating Systems, Data Structures and Algorithm, Artificial Intelligence, Theory of Computation, Computer Networks*

TECHNICAL SKILLS

Programming Languages: C++, Python, Java, Javascript
Frameworks: Flask, Fastapi, Tensorflow, Pytorch, React
AI & Machine Learning: Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, HuggingFace, Langchain, Langgraph, GenAI
Database Management: Supabase, PostgreSQL, MySQL, MongoDB
Version Control: Git, Github
Cloud Platform: Microsoft Azure (Azure Static Web Apps), AWS, Docker

WORK EXPERIENCE

Coding Ninjas   *June 2025 – Present*
GenerativeAI Engineer Intern

- Build and prototype internal Proof-of-Concepts using Generative AI tools like LLMs, LangChain, RAG pipelines, and AI Agents.
- Explore, test, and implement experimental GenAI workflows using Python and open-source tools.

PROJECTS

NeuNet - Neural Network from Scratch | *Python, NumPy, Matplotlib, Plotly*   <u>Live</u> | <u>Github</u>

- Implemented a multi-layer neural network with gradient descent achieving 92% accuracy on synthetic data.
- Defined modular components, including ReLU, Softmax, and Cross-Entropy for multi-class classification
- Created post-training visualizations of model architecture with Matplotlib and Plotly for insights.

Redoc - Research Paper Citation | *Python, FastAPI, React, Langchain, PostgreSQL*   <u>Live</u> | <u>Github</u>

- Built a document research application capable of analyzing 75+ documents simultaneously.
- Implemented multi-level citation system using Langchain and ChromaDB for semantic document processing.
- Scalable architecture with PostgreSQL, enabling document/paragraph/sentence-level citations in chatbot.

Finwell - Comprehensive Stock Market Analysis | *CrewAI, GoogleGemini, Rich, Click*   <u>Github</u>

- Developed a multi-agent financial analysis CLI tool using CrewAI for technical, fundamental and risk analysis.
- Real-time market data from Finnhub APIs with sentiment analysis to provide stock market insights.
- Implemented agent workflows generating investment recommendations with confidence scoring and detailed JSON reports for portfolio optimization.

ACHIEVEMENTS

- Finalist in **Smart India Hackathon** 2024 by the Ministry of Education, with over 3 lakh participants.
- 2nd Runner-up in Designathon, competing against 13+ colleges, hosted by Designhub.IIITD at **IIIT Delhi**.
- Finalist in the Openserv AI Agent Hackathon, hosted by Crossmint, selected from 1300+ competing teams.
- Awarded Bertelsmann Sponsorship for Next Generation Tech Booster Program enrollment.
- Achieved the Beta milestone as a Microsoft Learn Student Ambassador, contributing to technical workshops, community engagement, and mentorship.

POSITION OF RESPONSIBILITY

Computer Society - Chairperson | *IEEE − BVCOE*   *Aug 2024 - May 2025*
Led WIEHack 5.0, a highly successful hackathon attracting over 1800 students from India and 31+ countries.
Served as the design head for numerous events, overseeing and executing design tasks and building a website.

Head of Production | *TEDx − BVCOE*   *July 2024 - May 2025*
Overseen the planning and execution of all production activities for TEDx events on campus.