ABHINAV KUMAR SINGH

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Education

Bharati Vidyapeeth's College of Engineering, New Delhi (Under GGSIPU)

2022 - 2026

• Branch: Information Technology | CGPA: 8.33

(expected)

Universal Public School, India

2021 - 2022

AISSCE (Class XII), Aggregate:90%

Universal Public School, India

2019-2020

• AISSE (Class X), Aggregate:86.5%

Skills

Programming Languages: C, C++, Python, Java, Dart

Machine Learning: Scikit-learn, TensorFlow, Pytorch, Numpy, Pandas, Matplotlib, Seaborn, Flask, HuggingFace

Database Management: Google Firebase, PostgreSQL, MySQL, MongoDB

Version Control: Git, Github

Developer Tools: GitHub Codespaces, Copilot, Docker

Cloud Platforms: Microsoft Azure (Azure Static Web Apps), AWS

Projects

1. NeuNet - Neural Network from Scratch | Python, NumPy, Matplotlib, Plotly

November 2024

Developed a Neural Network from scratch for multi-class classification with custom data.

<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, to support multi-class classification.
- Created post-training visualizations of model performance and architecture with Matplotlib and Plotly for insights.

2. Brieflet - Research Paper Summarization | Python, Flask, PyTorch, Transformers, NLTK

December 2024

Built a tool that automates domain classification & summarization of research papers using machine learning.
Composed a tool leveraging Facebook's BART CNN & PyPDF2 to automate summarization with 93% accuracy.

Github

- Composed a tool leveraging racebook's BART ONIN & Fyr Dr 2 to automate summanzation with 35% accuracy
- Extracts key sections such as the **abstract** and **conclusion** to provide a structured overview of the paper's content.
- User-friendly API for integration with custom workflows, enabling seamless use of features in other applications.

3. AgenticBOB - Content Research and Writing Assistant | Python, Streamlit, CrewAl

January 2025

A powerful assistant leveraging multiple AI agents to generate high-quality content on any topic.

Github

- Seamlessly integrates with the **SerperDev API** for thorough web research through specialized AI agents.
- Provides customizable parameters and export options in **Markdown** or **JSON** formats.

Experience

Microsoft Learn Student Ambassador | Beta Milestone

September 2023 - Present

- Represent Microsoft within the student community.
- Led educational sessions on Microsoft technologies, technical content, and community building with student organizations.
- Acquired expertise in essential data analysis concepts.

Achievements

- Finalist in Smart India Hackathon 2024, organized by the Ministry of Education, chosen from over 3 lakh participants.
- 2nd Runner-up in Speed Designathon, competing against 13+ colleges, hosted by Designhub.IIITD at IIIT Delhi.
- Finalist in the Brandskulpt Design Challenge, conducted by IIT Delhi.
- Awarded Bertelsmann Sponsorship for enrollment in the Next Generation Tech Booster Program,

Positions of Responsibility

Computer Society - Chairperson | IEEE BVCOE

August 2024 - Present

- Led WIEHack 5.0, a highly successful hackathon attracting over 1800 students from India and 31+ countries.
- Serve as the design head for numerous events, overseeing and executing design tasks and building a website.

Head Of Production | TEDx BVCOE

July 2024 - Present

Oversee the planning and execution of all production activities for TEDx events on campus.