

# Subhayu Dutta

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## EDUCATION

<b>Dr. BC Roy Engineering College Durgapur, West Bengal</b> <i>Bachelor of Technology in Computer Science and Engineering</i>	<b>CGPA: 9.53</b> 2021-25
<b>DAV Model School, Durgapur, West Bengal - Senior Secondary</b> <i>Central Board of Secondary Education (C.B.S.E)</i>	<b>Percentage: 96.8%</b> 2021
<b>DAV Model School, Durgapur, West Bengal - Secondary</b> <i>Central Board of Secondary Education (C.B.S.E)</i>	<b>Percentage: 96.8%</b> 2019

## EXPERIENCE

<b>Spiraldevs Automation Industries Pvt. Ltd</b> <i>Machine Learning Research Intern</i>	<b>July 2023 - January 2024</b>
<ul style="list-style-type: none"><li>Developed a reliable and faster weight-updated rule for neural networks based on particle swarm optimization.</li><li>Designed a hybrid model integrating both computer vision and NLP for efficient complex document classification.</li><li>Developed a memory-optimized framework for on-device training of TinyML models using efficient optimizers.</li></ul>	

## PROJECTS

<b>ChatSphere</b>   <i>ReactJs, NodeJs, ExpressJs, Tailwind CSS</i>   <b>Link</b>	<b>September 2023</b>
<ul style="list-style-type: none"><li>Initiate or join chat rooms using distinctive room names, facilitating seamless communication.</li><li>Ensure confidentiality with secure group chats, prioritizing user privacy and data protection.</li><li>Experience real-time messaging with multiple participants, fostering efficient and dynamic conversations.</li></ul>	
<b>Weather Application</b>   <i>HTML, CSS, Javascript, REST API</i>   <b>Link</b>	<b>May 2022</b>
<ul style="list-style-type: none"><li>Provides detailed weather predictions, including temperature, precipitation, and wind conditions for the next five days.</li><li>Users can quickly select their desired location and access the forecast with an intuitive interface.</li><li>Offers personalized notifications for weather updates and severe weather alerts for the selected location.</li></ul>	
<b>Summify Now</b>   <i>Natural Language Processing, OpenAI, Streamlit</i>   <b>Link</b>	<b>May 2023</b>
<ul style="list-style-type: none"><li>Created a web application that provides summarization services for various text, video and audio.</li><li>Enables quick generation of summaries from YouTube links, delivering insights in seconds.</li><li>Enhances efficiency by condensing content from multiple formats into concise summaries.</li></ul>	

## TECHNICAL SKILLS AND INTERESTS

**Programming Languages** : C, C++, Python, Javascript, Java  
**Machine Learning** : Tensorflow, NumPy, Pandas, Langchain, NLTK, Hugging Face Transformers, LLM, MLFlow, DVC  
**Web Development**: ReactJS, HTML, CSS, Javascript, Streamlit, Flask, ReactJs, NodeJs, ExpressJs, Wordpress  
**Database and Cloud**: Firebase, MySQL, AWS  
**Areas of Interest** : Machine Learning, Deep Learning, NLP, Generative AI, MLOps, Web Development

## PUBLICATIONS

- DOI:** 10.3390/make6010023 **Dutta, Subhayu**, Subhrangshu Adhikary, and Ashutosh Dhar Dwivedi. "VisFormers—Combining Vision and Transformers for Enhanced Complex Document Classification." *Machine Learning and Knowledge Extraction* 6.1 (2024): 448-463. (**Scopus, ESCI**)
- DOI:** 10.1109/ICSCC59169.2023.10335067 **S. Dutta** and S.Adhikary, "Evolutionary Swarming Particles To Speedup Neural Network Parametric Weights Updates," 2023 9th International Conference on Smart Computing and Communications (ICSCC), Kochi, Kerala, India, 2023, pp. 413-418. (**Scopus**)

## ACHIEVEMENTS

- GATE Achievement:** Cleared GATE 2024 in Data Science and Artificial Intelligence with an AIR of **6339**.
- Leadership and Public Speaking:** Served as AI/ML Lead at Google Developers Student Club, Dr. BC Roy Engineering College, delivering speeches at multiple workshops and seminars focusing on AIML.