



**Avantika Mishra**  
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Computer Science Engineering  
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## EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech.	Vellore Institute of Technology, Vellore	8.56 (Current)	2021-Present
Senior Secondary	Delhi Public School Kalyanpur-CBSE Board	93.2%	2021
Secondary	Delhi Public School Kalyanpur-CBSE Board	95.2%	2019

## PROJECTS

- Personalized Healthcare Recommendation using BioBERT and RAG** Dec 2024 - Apr 2025  
*Tools: Python, BioBERT, FAISS, PyTorch, Flask, HTML/CSS, Google Colab, Transformers* Github
  - An end-to-end application that utilizes **Retrieval-Augmented Generation (RAG)** and **BioBERT** for delivering personalized healthcare recommendations.
  - Integrated **domain-specific biomedical knowledge** using **BioBERT** to enhance the contextual understanding of user medical queries.
  - Combined **dense passage retrieval** and **generative answering** to fetch relevant documents and generate human-like responses.
  - Enabled **dynamic retrieval** from a curated corpus of medical literature to ensure accurate and updated healthcare insights.
  - Built a **user-friendly interface** allowing individuals to input symptoms or health concerns and receive detailed, medically informed suggestions.
- Hateful Meme Detection using Multimodal : A robust system to identify hateful memes** Aug 2024 - Nov 2024  
*Tools: Python, TensorFlow, InceptionV3, BERT, Google Colab* Github
  - Designed a **multimodal classification system** to combine textual and visual information for meme analysis.
  - Integrated **InceptionV3** and **BERT** to extract complementary image and text features for better classification accuracy.
  - Implemented advanced **data augmentation techniques** for image pre-processing, improving the model's robustness to diverse meme formats and
  - Evaluated **multimodal fusion techniques (Early, Late, Tensor Fusion)** to identify the most effective method, achieving an accuracy improvement of
  - Collaborated with a research team to preprocess data from the **Facebook Hateful Meme Dataset** for training and validation.
- QR Code Generator with Node.js** Oct 2023 - Dec 2023  
*Tools: Node.js, JavaScript, qrcode library, inquirer, Express.js, HTML/CSS, VSCode, Git* Github
  - This project enables users to input URLs and **generate and download qr codes** with various customization options that can be easily scanned and put to use.
  - Node.js: The project is built using **Node.js**, a powerful JavaScript runtime that allows for server-side scripting.
  - NPM Libraries: **npm libraries** are used to handle QR code generation and customization. Some of the key libraries include **qrcode** for QR code generation and **inquirer** for user interaction.
  - User Interface: The project includes a **web-based interface**. Users interact with the system to input URLs and customize QR code settings.
  - QR Code Customization: The project leverages the capabilities of the **qrcode library** to allow users to adjust the QR code's appearance, including its size, colors, and error correction level.

## SKILLS

- Programming:** JavaScript, Python, C/C++, Java, SQL
- Tools and Frameworks:** Jupyter, Node.js, express.js, bootstrap, Power BI, Google Colab
- Areas of Interest:** Algorithms, Competitive Programming, Data Structures, Full Stack Web Development, Machine Learning, Data Science

## CERTIFICATIONS

- Google Cloud Digital Leader**, [Certificate](#) 2023
- AI ML Powered by Google Developers**, [Certificate](#) 2023
- Power BI- Data Analytics Essential with Power BI**, [Certificate](#) 2024
- Introduction to Generative AI**, [Certificate](#) 2024