Dhruv Maheshwari

B. Tech - Computer Science Engineering Student

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EDUCATION

B. Tech - Computer Science Engineering   📅 *Aug 2023 ~ Oct 2027*

PES University, Bengaluru

Distinction Award **x3**

ABOUT

I am a driven **Computer Science Engineering** student with a solid foundation in **Python, C, and full-stack web development**, alongside a **strong interest in AI and machine learning**. I am passionate about developing innovative solutions to real-world challenges and enjoy exploring new technologies. My hands-on experience spans both **software development** and **3D modeling**, supported by **industry recognized certifications**. I am committed to continuous learning and bring a collaborative, analytical, and adaptable mindset, along with **proficient communication** skills to every project I undertake.

SKILLS

Programming Languages: *Python, C, JavaScript*

Web Development: *MERN Stack (MongoDB, Express.js, React.js, Node.js), HTML+CSS*

Artificial Intelligence / ML: *HuggingFace Transformers, Models (OpenAI Whisper, Meta NLLB-200, Sentence-BERT)*

Additional Tools and Libraries: *NumPy, Pandas, PyTorch, Transformers, Sentence-Transformers, Langdetect, Jiwer, Librosa, Regex*

PROJECTS

EchoLang -   📅 *Jul 2025*

🔗 https://github.com/dhruvm-04/EchoLang

A **real-time multilingual** ASR translation and transcription system using **OpenAI Whisper, Meta NLLB-200, and Sentence-BERT**, integrating Python tools and libraries like **PyTorch, SciPy, NumPy, Pandas, transformers**, etc. for signal processing, data handling, and model evaluation. Achieved **close to 55% improvement** in Character Error Rate (CER) over baseline models in **code-switched** Indian language tasks.

MusiConvert - Cross Platform Playlist Converter   📅 *Mar 2025*

🔗 https://github.com/dhruvm-04/MusiConvert

A **Python** application enabling secure, cross-platform playlist conversion and sharing between Spotify and YouTube Music. Integrated **Spotify, YouTube, and Odesli APIs**. Features include **Wi-Fi Direct file transfer with end-to-end encryption, reliable data transfer, playlist import/export, automated recreation**, and a user-friendly interface for seamless music management across platforms.

EXPERIENCE

Intern - AI Application Development   📅 *Jun 2025 ~ Jul 2025*

xForm Solutions

Worked across domains including **automatic speech recognition**, **machine translation**, **natural language processing**, and **audio signal processing** while developing an **end-to-end pipeline** for multilingual (Hindi, Tamil, English) **code-switched** speech and text. My responsibilities included integrating models for **speech-to-text** transcription (**OpenAI Whisper**), translation (**Meta NLLB-200**), and **intent classification** per service category (**Sentence-BERT**), as well as implementing **custom rule-based error correction and urgency detection** logic. Focused on **real-world multilingual data handling**, **dynamic preprocessing of audio signals**, **semantic matching of user queries**, and **systematic model evaluation** using large-scale benchmarks, ensuring **robust performance** and usability in **low-resource** and challenging environments.

CERTIFICATIONS

Google IT Automation with Python

IBM Fundamentals of AI

AWS Prompt Engineering Foundation

University of Helsinki Elements of AI

Simplilearn Data Science with Python

EXTRA CURRICULARS

Head of Chassis Design and Fabrication

Team Vegavath Racing

Headed electric go-kart chassis development for **FMAE/FKDC** and **IKC** compliance using **Autodesk Fusion360** and **Blender**. Conducted workshops on **CAD design** and **internal combustion engine** maintenance for junior team members.

Under Secretary General - Head of Design

MUNSoc PESUECC

Delegated for student-led Model United Nations club, **organized an inter-college event** as **Under Secretary General – Head of Design.** Participated in **5+ MUNs**, winning **awards including a certificate for Honorable Delegate.**