PUNEET WALIA

📞 +91 9888818073 ✉ puneetwb18@gmail.com 🔗 puneet-walia ⬛ puneet-walia 🌐 puneet-walia.github.io

EDUCATION

Guru Nanak Dev Engineering College, Ludhiana   **Expected Graduation - June 2025**
Bachelor of Technology in Information Technology   *CGPA- 8.3*
Minors: Big Data Analytics; Entrepreneurial Studies

EXPERIENCE

Indian Institute of Technology, Indore   **April 2024 – Present**
Research Intern (under Dr. Chandresh Kumar Maurya, AI lab)

– Developed a speech-to-speech corpus for Indian languages to enhance dialogue generation accessibility and support for regional languages.
– Developed state-of-the-art models for Multilingual Neural Machine Translation .
– Expanded the system's capabilities to support multiple Indic languages within a unified framework.

Knowledge Media Institute, TOU   **Aug 2023 - Feb 2024**
Research Intern (under Dr. Angelo Salatino)

– Built a web crawler (Python) to extract data from IEEE, enriching the AIDA knowledge graph.
– Tackled IP restrictions by surmounting MAC address legally.
– Modularized the processing and parsed over 300,000 elements of data.

Trinity College Dublin, UOD   **Aug 2023 - Dec 2023**
Research Intern (under Dr. Ashish Kumar Jha, TBD dept.)

– Implemented a NLTK-based model to detect HR's perspective on Artificial intelligence, which will be included in TCD's business studies curriculum.
– Designed a Selenium model with Chrome Driver to preprocess and extract LinkedIn posts and arrange them in a spectrogram for sentiment analysis.

Guru Nanak Dev Engineering College, PTU   **Mar 2023 - June 2023**
Research Intern (under Dr. Sandeep Kumar Singla, HPC lab)

– Contributed to a government-supported project called 'Medigen', a pharmaceutical app to detect insights about medical drugs.
– Developed a template for NER models which can be fine-tuned according to any use case evaluation

Creations Media   **June 2022 - Sept 2022**
Machine Learning Engineer Intern (Project-based)

– Developed a website for a Machine Learning forecasting model using the MERN Stack.
– Created APIs for the forecasting model using FastAPI and integrated them into the UI.

TECHNICAL SKILLS

Languages	Python, Java, SQL, C++	**Tools**	Git, GitHub, Anaconda, Postman, Tableau
Frameworks	TensorFlow, PyTorch, Hadoop, NLTK, Scapy, FastAPI, Scikit	**Platforms**	Linux, Web, Windows, Arduino

PROJECTS

– **CancerClassifier** *Pytorch, Image Classification, Streamlit* A web application to classify skin cancer types using a pre-trained ResNet-50 model. The project includes data preprocessing, model training, and a Streamlit web application for predicting types of skin cancer from uploaded images.

– **GNDECScan** *React.js, Express.js, MongoDB, FastAPI, Natural Language Processing*
A web app designed for my college to scan and upload students' answer sheets. This app uses OCR technology to detect text from handwriting (especially Indic languages) based on a cascade model and uploads it to an admin page where it is maintained in a database.

– **Netflix's Story** *Tableau, PostgreSQL, RDBMS, Data Analysis*
Developed a comprehensive data narrative by preprocessing Netflix's shows and movies dataset. Analyzed genre distribution and ratings using visualizations, and presented the findings in an interactive format for user engagement.

PUBLICATIONS

– Rupinder Kaur, Sandeep Kumar, **Puneet Walia**. Predictive Analysis of Ludhiana's AQI (2023, November) **ICAET 11th edition.**
– Sandeep Kumar, **Puneet Walia**, Rajat Garg. Parkinson Detection using GAIT analysis and signal processing (2022, September) – ICAET 10th edition.

RECENT SUBMISSIONS

– Nivedita Sethiya, **Puneet Walia**, Saanvi Nair, Chandresh Kumar Maurya. Indic-S2ST: a Multilingual and Multimodal Many-to-Many Indic Speech-to-Speech Translation Dataset – **ACL**
– Nivedita Sethiya, Saanvi Nair, **Puneet Walia** , Chandresh Kumar Maurya. Indic-ST: A Large-scale Multilingual Corpus for Low-Resource Speech-to-Text Translation – **ACM-TALLIP**

VOLUNTEER

Center for Multi-Faceted Learning (CML) **Feb 2021 – Present**

– Headed peer-to-peer machine learning workshops for 320+ students.
– Created dashboards to organize faculty and student financial data, simplifying interpretation, which helped reduce annual expenses by 10%.

CRY-Child Rights and You **June 2020 – Present**

– Managed donor data and oversaw leads for children experiencing abuse.
– Instructed a class of 45 underprivileged children in fundamental Computer Science concepts.
– Initiated various offline and online crowdfunding programs which raised over 20,000 USD.

ACHIEVEMENTS

– Selected in Illuminate AI as a mentee out of 10,000 applications - June 2023.
– Selected as a delegate in AIS Youth Conference 2023 in Bali, Indonesia - September 2023.
– Reached the pre-final round of Samsung's Solve for Tomorrow - June 2022.
– Won the Inter-college Basketball championship 2023 as vice-captain.