

Jeevanshi Sharma

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EDUCATION

- **University of Alberta** Edmonton, AB, Canada
Master's in Computing Science - Multimedia Specialization *Sep'23 - Nov'24*
- **Zakir Husain College of Engineering and Technology, AMU** Aligarh, UP, India
Bachelor of Technology in Electrical Engineering *Aug'18 - Sep'22*

EXPERIENCE

- **Okaki Health Intelligence Inc** Calgary, AB, Canada
Machine Learning Engineering Intern *Nov'23 - Nov'24*
 - **NLP Pipeline Engineering and Deployment:** Engineered scalable NLP pipelines to automate cognitive assessments like MoCA, using Azure OpenAI to optimize AI-driven analytic; reducing clinician assessment time by 85% per patient.
 - **Advancing Audio-Speech NLP:** Integrated Whisper, WhisperX, and Azure Speech models for precise transcription and speaker diarization within a unified Transcription library. Standardized outputs using a unified dataclass, improving maintainability, interoperability, and modularity through object-oriented design.
 - **Realtime-AI Assistant:** Built a real-time AI assistant with vision capabilities for clinical assessments, using LiveKit's pipeline for seamless real-time processing.
- **Ersilia Open Source Initiative** Barcelona, Spain
Machine Learning Associate *Dec'22 - Mar'23*
 - **Deep Learning and Drug Taxonomy:** Implemented domain-specific transformer architecture (BioMed-RoBERTa-base) to extract semantic encodings from 1.2M bioassay documents, achieving 89% accuracy in clustering similar drug compounds.
 - **Software Development:** Built a Python package that automates TabNet model training with Optuna for hyperparameter optimization for biomedical data. Also worked on documentation and incorporation of ML models into Ersilia's Model Hub.
- **Emplay Inc** Dublin, CA, USA
Data Science Intern *Oct'21 - Apr'22*
 - **API Development and NLP Integration:** Architected a Topic-Suggestion API with custom extraction algorithm for generating keyphrases. Also, built a content moderation pipeline to detect toxicity using pre-trained language models.
 - **Keyphrase Extraction:** Developed a two-stage supervised keyphrase extraction method combining BERT contextual embeddings with a sequence labeling approach, with precision score of 0.37.
- **Dalhousie University** Halifax, NS, Canada
MITACS Globalink Research Intern *Jun'21 - Sep'21*
 - **Enhanced Natural Language Understanding:** Optimized pre-processing of datasets for compositional tasks, enabling efficient pre-training of language models such as ALBERT-xxlarge-v2, BERT-large-uncased, and RoBERTa-large.
 - **Advanced Semantic Evaluation:** Improved semantic evaluation techniques and accuracy by 15-20% for albert-xxlarge-v2 on benchmark datasets (ex: COPA, Winogender, aNLI, PDP), advancing zero-shot common-sense reasoning tasks.

PROJECTS

- **Budget AI:** Built REST APIs for a client application using MicroServices architecture. Developed an LSTM model for expense forecasting integrating AI educational content. Winner of CalHacks 8.0 *Microsoft Cloud Challenge: Building for Social Good* and ShellHacks *Code What Matters w/ JP Morgan Chase*.
- **Locust Location and Apprehension Module (LLAM):** Developed a web app to track locusts using satellite imagery and machine learning, predicting swarm attacks with 76% accuracy. Winner of *Microsoft Azure AI Hackathon '21*.
- **Dashboard for Indian Ministry of Statistics and PI:** Built a data visualization dashboard for National Account Statistics with admin functionality for data management and graphical representation. First Runner-Up at *Smart India Hackathon '19*.

PUBLICATIONS

- **Machine Learning For Classification Of Antithetical Emotional States:** 2022 *IEEE Xplore* J. Sharma, R. Maheshwari, Y. U. Khan
- **Evaluating Performance of Different Machine Learning Algorithms for the Acute EMG Hand Gesture Datasets:** 2022 *Journal of Electronics and Informatics* J. Sharma, R. Maheshwari, S. Khan, A. A. Khan
- **Evaluating CNN with Oscillatory Activation Function:** 2022 *arXiv Preprint* J. Sharma

SKILLS

- **Programming Languages:** Python, SQL
- **Programming Frameworks:** PyTorch, Flask, Huggingface, Langchain, Fast API
- **Tools:** Docker, Azure AI, AWS Bedrock, Linux Command Line, Git, Pandas, Numpy
- **Technologies:** Deep Learning, NLP, Vector Databases, Transformer Architectures, Prompt Engineering, RAG