

Jeevanshi Sharma

Experience

- Dec '22
- March '23
- Ersilia Open Source Initiative**
Outreachy Intern
- Built the python-package Auto-TabNet for Ersilia, which is an implementation of Google's TabNet along with hyperparameter search with Optuna.
 - Incorporated Deep Learning model to extract word embeddings for textual bioassays data using allenai's biomed-roberta-base and Machine Learning model for drug taxonomy identification and explainable feature extraction into the Ersilia's Model Hub.
 - Contributed to debugging and troubleshooting other models to be incorporated into the Model Hub.
 - Improving documentation for maintainers and users contributing to Ersilia's Model Hub.
- Oct '21
- April '22
- Emplay Inc** *Dublin, CA*
Data-Science Intern | Advisor: CV Goudar (CTO)
- Contributed to building **Topic-Suggestion**, API end-to-end, capable of generating relevant tags/key-phrases with 0.37 precision. Developed benchmarking methods for keyphrase evaluation, for the tags generated by Topic-Suggestion API.
 - Implemented methods for extracting key-phrases using **supervised approach** with a precision score of 0.37.
 - Contributed in developing **Content Moderation** pipeline for filtering toxicity in the content, using pre-trained language models (distil-roberta) to identify subtle toxicity in user's comments.
- Jun '21
- Sep '21
- Dalhousie University** *Halifax, Canada*
MITACS GLOBALINK RESEARCH INTERN | Advisor: Prof. Darren Abramson
- Worked with datasets for **Compositional Task** in Natural Language Understanding, pre-processed them for pre-training of State-Of-The-Art Language Model (albert-xxlarge-v2, bert-large-uncased, roberta-large, etc.).
 - Contributed to improving the semantic evaluation of language and getting the results on Benchmark Datasets (COPA, Winogender, aNLI, PDP, etc.) for Common-Sense-Reasoning tasks using **Zero-Shot measurements**.
- March '20
- Present
- Centre of Interdisciplinary Biomedical and Human Factors Engineering, AMU** *Aligarh, India*
Undergraduate Researcher | Advisor: Professor Yusuf Uzzaman Khan
- Worked on projects including detecting Human Emotions and Brain Network Analysis based on EEG signals using Deep Learning (refer [publications](#)) with a primary focus on studying Human Cognition using Machine Learning.
- July '19
- Aug '19
- Carrier Air Conditioning and Refrigeration Limited** *Gurugram, India*
Summer Intern | Department: Maintenance
- Surveyed Utility Power Zone and Assembly Lines at the Industry and collected data on power distribution.
 - Built a Dashboard for Data Visualization of Power Distribution in different channels in Utility Power Zone.

Publications

- 2022 **J Sharma, R Maheshwari, Y U Khan**, Machine Learning For Classification Of Antithetical Emotional States, *Published in: IEEE Xplore*
[\[paper\]](#)

- 2022 **J Sharma, R Maheshwari, S Khan and A A Khan**, Evaluating Performance of Different Machine Learning Algorithms for the Acute EMG Hand Gesture Datasets, *Published in: **Journal of Electronics and Informatics***
[paper]
- 2022 **J Sharma**, Evaluating CNN with Oscillatory Activation Function, *arxiv preprint*
[paper]

Education

- Aug '18 **Zakir Husain College of Engineering and Technology, Aligarh Muslim University** *Aligarh, India*
- Sep '22 *Bachelor of Technology in Electrical Engineering* *CPI: 8.57/10*
Thesis: Deep Learning Based Human Emotion Classification using EEG signals.

Awards & Achievements

- 2022 Selected as one of the 64 **Outreachy** Interns among 1378 applicants for Dec'22 - March'23 cohort.
- 2021 Won **Microsoft Cloud Challenge: Building for Social Good** Award at Cal Hacks 8.0 organised at *UC Berkeley*.
- 2021 Won Code What Matters w/**JP Morgan Chase** at Florida's Largest Hackathon organised by *Florida International University*.
- 2021 Won *Popular Choice Award* at **Microsoft's Azure AI** Hackathon.
- 2021 Winner **RoboHacks 2021** Hackathon organized by *Major League Hacking*.
- 2021 Winner **SharkHacks 3** Hackathon organized by *Major League Hacking*.
- 2020 Selected for the **MITACS Globalink Research Internship** to participate in a 12-week research at the *Dalhousie University, Halifax, Canada*.
- 2019 First Runner Up at **Smart India Hackathon 2019** (Ministry of Statistics and PI) organised by MHRD, India.

Projects

- Aug '21 **Budget AI** | *Balanced Financial Ecosystem*
- Oct '21
 - Built REST APIs for the client application following MicroServices architecture.
 - Developed Expense forecaster, an LSTM model that uses the user's spending history to forecast future expenses and components for budget diary visualization.
 - Currently working on building an exclusive budget score and exploring personalised content delivery AI Systems.
- Oct '18 **Locust Location and Apprehension Module (LLAM)**
- Jan '19
 - LLAM is a web application that tracks the real-time locust's location and visualizes wind patterns on earth and predicts the probability of locust swarm attack on any given location through satellite imagery using machine learning models.
 - Built Machine Learning Pipelines for predicting the probability of Locust Swarm Attack, the model was able to reach to an accuracy of 0.76.
- March '19 **Dashboard for Ministry of Statistics and PI**
 - Data Visualisation for the National Account Statistics, built under Smart India Hackathon - 2019 edition.
 - Built the dashboard wherein, all the statistical data can be uploaded(by admin), modified, and displayed as graphs.
- 2019 - 2021 **Other Projects:**
 - **Fake News Detector** Built using NLP Techniques and trained on the Fake News Kaggle Dataset. Various ML Classification Algorithms and Neural Networks were incorporated to achieve an accuracy of 93.12% on Passive-Aggressive Classifier. A Flask-based web-app was built to detect fake news in real-time through the URL of the article.
 - **Implementation of EfficientNet in Tensorflow** EfficientNet have proved their mantle in all kind of image processing tasks with a wide variety spanning from B0 to B7. Experimented with numerous EfficientNets and showcase the results via Gradio.

Relevant Coursework

Bachelor's Signals and Systems, Digital Signal Processing, Mathematics-I (Linear Algebra & Advanced Calculus), Mathematics-II (Partial Differentiation & Multivariate Calculus), Higher Mathematics (Numerical Analysis), Machine Learning, Selected Topics in Engineering, Computer Programming, Bio-physics, Engineering Graphics Lab, Applied Physics, Control Systems

Online NLP Specialization by Coursera, Deep Learning for Coders by fast.ai

Skills

Languages Python, SQL

Frameworks Pytorch, Tensorflow, Keras, Flask

Tools Azure AI Services, MongoDB, Linux Command Line, Git, GitHub, \LaTeX , Jupyter Notebook, Docker

Soft Skills Leadership, Storytelling, Theatre, Public Speaking

Volunteer Experience

- April '19 **AMU-OSS** | *Technical Lead*
- Present Leading the Open-Source Society of University, providing guidance and support and networking opportunities to help students advance their career.
- Sep '20 **DevScript** | *Community Mentor*
- Dec '21 Mentored over 1000+ students in the Machine Learning Domain.
- 2020 - 2021 **Open-Source Mentor** | *DWOC, LetsUpgrade*
Project Mentor at All India Open-Source Events.