#### Arshia Naaz

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Examination	University/School	Institute	Year	CPI/%
Post Graduate Specialization:	Artificial Intelligence			
Post Graduation(M.Tech CSE)	Aligarh Muslim University	<b>ZHCET</b>	2022-2024	8.75
UnderGraduate Specialization:	Computer Science and Engineering			
Graduation(B.Tech)	Jamia Hamdard	SEST	2017-2021	9.35
Higer Secondary Examination:	Physics, Chemistry, Maths			
12th Standard	Meerut Public School For Girls	MPSFG	2016	93.6
Secondary Examination				
10th Standard	Meerut Public School For Girls	MPSFG	2014	8.4

### **GATE 2022 QUALIFIED**

• AIR -3696, SCORE - 477

### **TECHNICAL SKILLS**

- Languages: C, Python, Java, Object Oriented Programming
- Libraries: Pandas, Seaborn, Numpy, Matplotlib, keras, sci-kit learn, NLTK, Hugging Face, BeautifulSoup, tensorflow, type hinting
- Data science: Feature Engineering, EDA, Web Scrapping, Statistics, Logging, NLP, Artificial Intelligence, REST API using flask
- Feature Engineering: Mutual Information, Feature Creation, Clustering, PCA, Target Encoding
- Machine Learning: Supervised and Unsupervised Learning, Dimensionality Reduction, Clustering, Decision Trees, Random Forest, Bagging and Boosting, XGBoost, Regression, Naive Bayes, Loss functions
- **Deep Learning**: Perceptrons, FeedForward Neural Networks, Gradient Descent, Autoencoders, Convolutional Neural Networks, Graph Neural Networks, Ensembling Modelling, Backpropagation
- LLM: Phi2, Mistral, llama, Lora and Qlora fine tuning
- Database, Framework : MySQL, Streamlit

### **INTERNSHIP**

- Sine Internship under Dr. Sudarshan Iyengar Sir, Head of the Department at IIT Ropar(15 May 2024 15 July 2024)
  - Developed a student progress tracking system to monitor their progress, set goals, and stay motivated.
  - The system provides teachers with detailed insights and automates tasks using google sheets and google apps script integration.
- Virtual Internship at Accenture as a Data Analyst
  - Applied data analytics and visualization skills to advise a social media client on their content creation strategy. Tasks Performed - Project Understanding, Data Cleaning and Modelling, Data Visualization and Storytelling, Present to the Client

## MAJOR PROJECTS AND SEMINAR

• Fine Tuning Phi2 and Mistral on Suicide Detection Data

- The purpose was to adapt the models capabilities to more accurately identify and interpret signs of suicidal ideation in textual content.
- Applied QLoRA for Efficient Fine-Tuning, Configured Model and Data, Enabled 4-bit Quantization with Bitsandbytes, Executed Supervised Fine-Tuning, Evaluated model performance using ROUGE scores

## • Face Mask Detection (BTech Final Year Project)

(Guide:Dr. Harleen Kaur)

- Developed face mask detection system using OpenCV, Keras, and TensorFlow.
- Trained CNN to classify faces with/without masks. Implemented real-time face detection and mask classification
- Evaluated system performance using accuracy and loss metrics.

## • Suggestion Mining Based on Sentiment Analysis. (M. Tech. Project)

(Guide: Dr. Nadeem Akhtar)

- Compared performance of pre-trained DistilBERT model and customized DRC\_Net model for suggestion mining.
- Demonstrated value of transfer learning in leveraging knowledge from broader sentiment analysis tasks
- o Fine tuned pre-trained models on domain-specific game review dataset for suggestion mining.

# • Link Prediction and Node Classification Using Graph Neural Network. (M. Tech. Research) (Guide: Prof. M. Sarorsh Umar)

- Conversion of unstructured textual data into a graph, facilitating the generation of both heterogeneous and homogeneous graphs
- Conducted in-depth analysis of link prediction techniques and node classification algorithms on graphstructured data, including Graph Convolutional Networks (GCN), SAGEConv, and Graph Attention Networks (GAT).

### RESEARCH INTEREST

- M.Tech Dissertation "Distressful Ideation Detection From Social Media Using Graph Neural Network" under the guidance Prof. M Sarosh Umar Sir and Dr. Prerna Vadra Kohli (Psychologist), centers on employing link prediction techniques on heterogeneous graphs and node classification algorithms on homogeneous graph to identify instances of suicidal ideation within expressive content shared by social media users.
- Research Paper titled 'Towards Effective Suggestion Mining in Game Reviews: Introducing an Aspect-Based Multiclass Multilevel Dataset' has been accepted and presented for publication in the Springer LNNS series.
- Research Paper titled 'Suggestion Mining Based on Sentiment Analysis' has been accepted in 2nd International Conference on Computational Research and Data Analytics (ICCRDA-2025), the proceedings of ICCRDA 2025 will be published by IEEE Computer Society (IEEE Xplore).

## CERTIFICATES

- o NPTEL Deep Learning IIT Ropar (24 July 2023 13 October 2023)
- Feature Engineering From Kaggle (2024)
- o Machine Learning Bootcamp from iNeuron.ai (2024)
- Neural Networks and Deep Learning from Coursera (December 2020 Feb 2021)
- o Programming for everybody(getting started with python) from Coursera (May June 2020)
- Python Data Structures certificate from Coursera (July 2020 August 2020)
- o C and C++ Training Certificate from Internshala (June 2018 July 2018)
- o Certificate of java training by spoken tutorial, IIT Bombay (April 2020)

## **LINKS**

- o www.linkedin.com/in/arshia-naaz-9aa5101b8
- o https://github.com/ArshiaNaaz
- o https://www.kaggle.com/arshianaaz