

# NOAIMA BARI

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## EDUCATION

- Georgia Institute of Technology** Atlanta, GA, USA  
*Master of Science (MS), Electrical & Computer Engineering: **Machine Learning Specialization (3.90/4)*** Aug 21 - May 23  
**Coursework:** Machine learning, Mathematical Foundations of Machine learning, Graphical Models in Machine Learning, Fundamentals of Machine Learning, Computer Vision, PDEs in Image Processing and Vision, Medical Image Processing, Database Systems, Advanced Programming Techniques, Natural Language Processing, Tech Entrepreneurship
- Jamia Millia Islamia University** Delhi, India  
*Bachelor of Technology, Electrical Engineering: **GPA: 9.91/10 (Rank 1)*** Aug 17 - May 21

## SKILLS

**Languages:** C++, Python, Go, SQL, JavaScript, HTML, CSS

**Technologies/Frameworks:** PyTorch, Flask, NumPy, AWS Lambda, Latex, Git, PostgreSQL, Agile Methodologies, JIRA

**Certifications:** Data Structures and Algorithms in C++ (Coding Blocks), Deep Learning Specialization (deeplearning.io)

## EXPERIENCE

### GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

Graduate Assistant

Jan 23 – April 23

- o Grader for the course MUSI 6202: Digital Signal Processing for Music
- o Responsible for organizing quizzes and grading assignments for a class of 40 students
- o **Tech Stack:** MATLAB, Git

### ALTAIR ENGINEERING

Troy, MI

Software Engineer Intern

Aug 22 – Dec 22

- o Worked with the HyperWorks core development team to develop a user assisting tool for a simulation software
- o Utilized deep learning sequence modeling concepts to model user command history data
- o Utilized recurrent neural networks (RNNs) to predict next command in a sequence
- o **Tech Stack:** Python, Pandas, TensorFlow, GUI

### REVEL SYSTEMS

Atlanta, GA

Software Engineer Intern

May 22 – Jul 22

- o Worked in an Agile Environment to build a menu engineering dashboard for QSRs to optimize their menu
- o Utilized AWS Lambda as the backend engine and AWS AppSync for a GraphQL API to serve requests
- o Performed statistical analysis on sales data and utilized PostgreSQL to query complex results
- o Contributed towards architecture and database designs for the project
- o **Tech Stack:** Backend: Go, GraphQL, AWS Lambda, AppSync, RDS, Frontend: React, Chart.js, JavaScript

### CODING NINJAS

Delhi, India

Teaching Assistant, Data Science & Machine Learning

Nov 20 - Mar 21

- o Conducted daily doubt sessions for undergraduate students in areas of machine learning, neural networks & data science
- o Graded assignments, evaluated projects and debugged python codes for **over 200 students**
- o **Tech stack:** Python, Pandas, NumPy, Scikit-learn, PyTorch, Selenium

## RELEVANT PROJECTS

- **[Image Processing & Computer Vision] Automatic Detection and Grading of Diabetic Retinopathy** Feb 22 – May 22
  - o Created a decision-making pipeline involving data augmentation, image processing, feature engineering & classification
  - o Developed an ensemble model using CNN algorithms with an average **MCC of 74%**
  - o Developed an explainable AI methodology using Grad-CAM for better interpretability of result
- **[Natural Language Processing] Idiomatcity Detection using Zero-Shot and One-Shot Learning** Oct 21 – Dec 21
  - o Performed data cleaning, preprocessing, EDA and feature engineering on Idioms Dataset from SemEval22 task
  - o Fine-tuned pretrained Large Language Models (LLMs) in zero shot and one shot settings
  - o Achieved F1 score of **0.73** and accuracy of **0.78** using XL-Net in zero shot settings.
- **[Database Systems] Airline Booking Management System** Aug 21 – Dec 21
  - o Created an app using Flask and MySQL database for booking flight tickets and performing search operations
  - o Performed conceptual modeling using EER Diagram and logical mapping to a relational data model
  - o Implemented queries for searching, booking, retrieving, canceling flights and generating reports

## PUBLICATIONS

- **Interpretable Evaluation of Diabetic Retinopathy Grade Regarding Eye Color Fundus Images** Nov 22
  - o IEEE International Conference on Bioinformatics and Bioengineering (BIBE 2022)
- **Language Lexicons for Hindi-English Multilingual Text-Processing** Dec 21
  - o IAES International Journal of Artificial Intelligence (IJ-AI) Vol. 8 pp. 31-38
- **Priority Based Power Delivery System for Electric Vehicle Charging** Dec 20
  - o Artificial Intelligence Systems and the Internet of Things in the Digital Era proceedings by Springer Verlag

## ACHIEVEMENTS

- Gold Medal – B. Tech Electrical Engineering, JMI (Batch of 2021) Sept 21
- Outstanding Women in Engineering Award, IEEE Delhi Section Nov 20
- National Finalist - Smart India Hackathon (2020) (Software Edition) Aug 20