Sabbir **Mollah**

MACHINE LEARNING ENGINEER

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Summary

A professional with expertise in **Machine Learning** and **Deep Learning** research and development. The current stack includes **PyTorch**, scikit-learn, pandas, and Apache Spark. Currently working as **"Software Engineer, Machine Learning"** at **Apurba Technologies Ltd.**

Experience

Apurba Technologies Ltd.   *Dhaka, Bangladesh*

SOFTWARE ENGINEER, MACHINE LEARNING   *Sep. 2022 - Present*

- My primary responsibilities in this job are designing, developing, researching and documenting **Machine Learning based solutions**.

Apurba-NSU R&D Lab   *Dhaka, Bangladesh*

PART-TIME RESEARCH ASSISTANT   *Sep. 2021 - Aug. 2022*

- **Published a paper** which improves performance of OCR models on morphologically languages like Bangla.
- Worked with several NLP based projects.

ECE Department, North South University   *Dhaka, Bangladesh*

PART-TIME LAB INSTRUCTOR   *Spring 2022 & Summer 2022*

- Taught Database Management Systems (DBMS) using **SQL and Object-Oriented Programming (OOP) using Java** to an average class size of 40 students.
- Prepared lab materials and provided exam questions; examined students' answer scripts.
- Provided assessment and guidance to students as they worked on their projects.

Education

North South University   *Dhaka, Bangladesh*

B.S. IN COMPUTER SCIENCE AND ENGINEERING   *Jan. 2017 - May. 2021*

- Graduated with **Magna Cum Laude distinction**, CGPA - **3.73/4.00**.,
- Thesis title: Domain Adaptation on Speaker Recognition Problem with RawNet.
- Relevant Courses: Pattern Recognition and Neural Network, Natural Language Processing, Introduction to Linear Algebra.

BAF Shaheen College Kurmitola   *Dhaka, Bangladesh*

HSC   *2014 - 2016*

- GPA: **5.00/5.00**.

Rajoir Gopalgonj KJS Pilot Institution   *Dhaka, Bngladesh*

SSC   *2012 - 2014*

- GPA: **5.00/5.00**.

Skills

Programming	Proficient in **Python**, C, C++ and Java. Knows C#, PHP and Javascript.
Development	Proficient in **Clean Coding** concepts and Object Oriented **Design Patterns**.
Machine Learning	Experience working with **PyTorch**, **Keras**, scikit-learn, pandas, pyspark and matplotlib.
Database	Intermediate to advanced level Database Management System knowledge using **MySQL**.
Version Controlling	Well-read on the best practices of Version Controlling using **Git**.
Communications	A skilled communicator who is comfortable speaking in public and writing papers.
Languages	Bangla, English and Italian.

Volunteering Experience

NSU ACM Student Chapter   *Dhaka, Bangladesh*

CHAIR   *Jan. 2020 - Dec. 2020*

- Elected as the **Chapter Chair**.
- Lead this community of 300+ members.
- Planned and **organized HackNSU Season 2**, an inter-university Hackathon with more than 25 participating teams.
- I have been awarded Best Member twice during my general membership period.

NSU Communications Club

Sub Executive

- Lead the Promotions team responsible for digital advertisement.
- Increased outreach by **creating creative videos** using video editing tools.
- Created banners, covers, and logos for different events using graphics designing tools.

Dhaka, Bangladesh

Jan. 2018 - Dec. 2019

Workshops

Instructor

- Workshop on Deep Learning with PyTorch - 2022
- The First Layers of Neural Networks Workshop - 2021
- Python for the Parseltongues Workshop - 2020

Dhaka, Bangladesh

2020, 2021, 2022

Achievements & Awards

Robi Datathon 2.0

Finalists

- Among top 25 out of 384 teams.,
- Plotted geographic maps using geospatial data.
- Optimized pyspark queries for faster queries on large data.
- Implemented cost sensitive learning to bump performance of a machine learning model.

Robi, Axiata Ltd., Dhaka, Bangladesh

2022

MIST Inter-University ICT Innovation Fest Hackathon

Champions

- Deployed a handwriting recognition model.,
- Designed a handwriting identification model.

MIST, Dhaka, Bangladesh

2021

IOT For Tomorrow

First runners-up

- Presented a fire detection circuit using a microcontroller integrated with Firebase.

NSU IEEE Student Branch, Dhaka, Bangladesh

2019

Electrathon

2nd runners-up

- Written a python automation script using selenium.,
- Built an Arduino solution to the given problem.

NSU IEEE Student Branch INSB, Dhaka, Bangladesh

2018

National Talent Hunt

Best talent in Computer & Math in Madaripur

- Participated in a series of competitive tests on Mathematics and Computer Science up to District level.

Bangladesh Education Ministry, Dhaka, Bangladesh

2012

Publications

LILA-BOTI: Leveraging Isolated Letter Accumulations By Ordering Teacher Insights for Bangla handwriting recognition.

Contributions:

- Writing Deep Learning OCR models to recognize handwritten images
- Writing custom dataset codes for large corpus.
- Writing algorithms to tackle challenges that arise in the Bangla language.
- Training models with different parameters.
- **Reference:** Hossain, M. I., Rakib, M., Mollah, S., Rahman, F., & Mohammed, N. (2022). LILA-BOTI: Leveraging Isolated Letter Accumulations By Ordering Teacher Insights for Bangla handwriting recognition.

ICPR 2022, Montreal, Canada

2022