

Mohammad Sabik Irbaz

Former Lead Machine Learning Engineer

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Education

Islamic University of Technology(IUT) Dhaka, Bangladesh
B.Sc. in Computer Science and Engineering (CSE) Jan, 2017 - Mar, 2021
CGPA: 3.44/4.00 [3.90 in the final semester]
Dissertation: “Medical Expertise Text Style Transfer using Denoising Autoencoders”
Supervisor: Dr. Kamrul Hasan, Professor, Department of CSE, IUT

Notre Dame College(NDC) Dhaka, Bangladesh
Higher Secondary Certificate (HSC), 2016 Jul, 2014 - Dec, 2016
GPA: 5.00/5.00

Cox's Bazar Government High School Cox's Bazar, Bangladesh
Secondary Secondary Certificate (SSC), 2014 Jan, 2009 - Dec, 2013
GPA: 5.00/5.00

Industrial Experience

Pioneer Alpha Ltd. Dhaka, Bangladesh
Lead Machine Learning Engineer Jan, 2021 - Sep, 2021
Supervised and delivered the following core projects successfully to the corresponding clients:
(1) Multilingual Chatbot as Business Assistant — *NLP, Tensorflow, Rasa, Flask*
(2) Low-resource Bangla License Plate Detection and Recognition — *Vision, Tensorflow, OpenCV, Flask*
(3) Face Detection and Recognition for Remote Office — *Vision, OpenCV, dlib, Flask*
(4) Adobe Premiere Plugin for Automated Video Editing — *Vision, OpenCV, dlib, Adobe Premiere*

Omdena Inc. New York, USA
Lead Machine Learning Engineer Apr, 2021 - Jun, 2021
Collaborated with 50 ML engineers from 20 countries on **Equilo Project** - Building Gender Equality Assessment Functionality using NLP. This large scale work was divided into 7 major tasks. I was the **task leader** of the team building the **recommender system** for the organizations with low gender equality scores. I also lead the team building the web app and deploying the whole data and ML pipeline to **GCP**.

Nascenia Ltd. Dhaka, Bangladesh
Software Engineer, Intern Nov, 2019 - Jan, 2020
Worked on a large-scale government project on VAT automation, **Project Uddogi**

Teaching Experience

Amar iSchool Dhaka, Bangladesh
Head Course Instructor Mar, 2021 - Present
Applied Data Science and Machine Learning [[Course Link](#)][[Course Repository](#)]
Our prime goal here is to empower the local Machine Learning and Data Science enthusiasts with a limited background knowledge of Computer Science and Mathematics.

Research Experience

Fordham Human Centered AI Research Lab

Mar, 2021 - Present

Department of CIS, Fordham University, NY, USA

Advisors: Dr. Md. Ruhul Amin, Dr. Ashique KhudaBukhsh (RIT, USA)

- COVID-19 Public Policy Stance Analysis
- Explainability of hate speech towards minority groups and how to reduce them

Systems and Software Lab (SSL)

Jul, 2019 - Present

Department of CSE, IUT, Dhaka, Bangladesh

Advisors: Dr. Kamrul Hasan, Prof. Hasan Mahmud

- Automated wheelchairs for semi-paralyzed patients.
- Data-centric approach towards Medical Expertise Text Style Transfer

Publications

(1) “End-to-End Natural Language Understanding Pipeline for Bangla Conversational Agents”

Fahim Shahriar Khan, Mueze Al Mushabbir, **Mohammad Sabik Irbaz**, MD Abdullah Al Nasim

Accepted in *IEEE ICMLA 2021* [PDF]

(2) “Real-Time Face Recognition System for Remote Employee Tracking”

Mohammad Sabik Irbaz, MD Abdullah Al Nasim, and Refat E Ferdous

Presented in *BIM 2021* [PDF]

(3) “Nurse Care Activity Recognition Based on Machine Learning Techniques Using Accelerometer Data”, **Mohammad Sabik Irbaz***, Abir Azad*, Tanjila Alam Sathi, Lutfun Nahar Lota

Presented in *UbiComp/ISWC HASCA 2020* [DOI] [PDF] [Presentation] [Code]

(4) “Real-time Bangla License Plate Recognition Pipeline for Low Resource Video-based Applications” Alif Ashrafee*, Akib Mohammed Khan*, **Mohammad Sabik Irbaz**, MD Abdullah Al Nasim

Under Review [PDF]

Technical Skills

Programming Language: Python, C, C++, Ruby, Octave

Framework: Pytorch, fastai, Flask, Tensorflow, Keras, Ruby on Rails

Tools and Libraries: Git, LaTeX, Google Colab, Google Cloud Platform

Projects

An exhaustive list can be found [here](#)

(1) **Medical Expertise Style Transfer System for Layman Patients** — *PyTorch, Fastai, Flask* [Code]

(2) **Multimodal Multi-label Genre Classifier** — *PyTorch, Fastai, Numpy, Pandas* [Code]

(3) **Anime vs Animation vs CGI** — *PyTorch, Fastai, Flask* [Code]

(4) **Original Transformer for Bengali Translation** — *PyTorch, Flask* [Code]

Competitive Programming Experience

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- Solved **2000+** programming problems in different online judges using C++, Python.
 - Participated in **20+** onsite Inter University Programming Contests and **200+** online contests.
 - Participated in **ACM ICPC Dhaka Regionals** 3 times.
 - Attended BACS - BUBT **National Programming Camp** 2017.
 - Achieved 1632 max rating (**Expert**) in **Codeforces** and 1844 max rating (**Violet**) in **Codechef**.
 - **Contest Judge**, **16th December Programming Contest 2019**
 - **Former Programming Instructor**, IUT Programming Community

Awards & Achievements

An exhaustive list can be found [here](#)

- **Champion**, 2nd Nurse Care Activity Recognition Challenge 2020.
- **Finalist**, AI For Bangla Challenge 2021 [Team ID: **161**].
- **Runners Up**, IUT Computer Programming Contest 2019
- **Runners Up**, INWED Tech Fest IUPC 2019
- **2nd Runners Up**, EDU Inter University Programming Contest 2020.
- **2nd Runners Up**, Britannia University Inter University Programming Contest 2020
- **OIC Scholarship**, 75% expense coverage for undergraduate studies at IUT. (2% acceptance rate)

Extra-curricular Activities

- **Associate Member**, Omdena Global Community
- **Former Vice President**, IUT Computer Society
- **Assistant General Secretary**, IUT 10th ICT Fest
- **Volunteer Coordinator**, IUT 9th ICT Fest
- **Class and Batch Representative**, IUT CSE'16

References

Available upon request