

# Ahmed Shahriar Sakib

Waterloo, ON, Canada

✉ [ahmed.shahriar.sakib@gmail.com](mailto:ahmed.shahriar.sakib@gmail.com) [ahmedshahriar.com](https://www.linkedin.com/in/ahmedshahriar) [ahmedshahriar](https://www.linkedin.com/in/ahmedshahriar)  
 🌐 [ahmedshahriar](https://www.linkedin.com/in/ahmedshahriar) [k ahmedshahriarsakib](https://www.linkedin.com/in/ahmedshahriar)

## Education

### University of Waterloo

September 2022 – Present

*Master of Applied Science (MASC) in Management Sciences*

*Waterloo, ON, Canada*

Research Focus: Machine Learning, Spatiotemporal Data Analysis, Deep Learning

Scholarships: Graduate Research Studentship (GRS) and International Master's Award of Excellence (IMAE)

### American International University-Bangladesh

May 2016 – December 2019

*Bachelor of Science in Software Engineering*

*Dhaka, Bangladesh*

CGPA: **3.93**/4.00, Academic Scholarship (2017-2018)

Major Courses: Data Warehousing and Data Mining, Statistics And Probability, Computer Vision and Pattern Recognition

## Professional Experience

### Graduate Teaching Assistant

September 2022 – Present

*University of Waterloo*

*Waterloo, ON, Canada*

- *Teaching Assistant* - Organizational Behaviour (MSCI 211) and Engineering Economics: Financial Management for Engineers (MSCI 261)
- Grading assignments and providing constructive feedback to students
- Performing other regular TA duties: met with students and instructor as needed (in person), responding to students' questions via email, proctored exams, and others

### Research Associate (Data Science)

December 2020 – May 2022

*Socio Cognitive Lab*

*Dhaka, Bangladesh*

- Identified and formulated research problem and scope
- Performed data collection, preparation, and analysis
- Designed, developed, and evaluated machine learning models

### Software Engineer (Python)

January 2020 – August 2020

*Ergo Ventures Limited*

*Dhaka, Bangladesh*

- Built scalable back-end for 4 business-critical websites (e-learning, e-commerce).
- Upgraded a web instance dashboard tool using DRF, PostgreSQL, Celery, and RabbitMQ
- Performed data migration, data wrangling and wrote automation scripts to speed up the workflow
- Worked with ERP software, extended software modules including database designing and modeling

### Software Developer (Contract)

April 2019 – September 2019

*DrutoTech*

*Dhaka, Bangladesh*

- Designed and developed various automation and web scraping scripts to extract desired data from different websites, performed data wrangling, and built ETL pipeline using python libraries and SQL
- Developed end-to-end REST APIs and two E-commerce android apps (B2B, B2C) and deployed them to the Google play store
- Optimized database transactions and performed image compression using [fb-spectrum](#)

### Freelance Consultant

2019 – Present

*Data Science, Python Tech Stack, Tutoring*

- Performing data scraping, analytics, wrangling, and automation tasks and developing ETL pipeline
- Developing web back-end with python frameworks, SQL and NoSQL databases
- Tutoring python, data science and machine learning

## Undergraduate Research

---

**Title** : Can We Predict Insomnia From Tweets?

**Description** : In this research, a hypothesis is being presented to predict insomnia by analyzing users' tweets. After collecting, filtering, and pre-processing the tweets, psycholinguistic patterns, i.e., word usage and semantics were extracted and fed to a classification model for insomnia prediction. [Thesis Book](#)

\*The extended version of this work has been published at *Journal of Medical Internet Research*

## Publications

---

[1] **Ahmed Shahriar Sakib**, Md. Saddam Hossain Mukta, Fariha Rowshan Huda, A.K.M. Najmul Islam, Tohedul Islam and Mohammed Eunus Ali, "Identifying Insomnia from Social Media Posts: Psycholinguistic Analyses of User Tweets", *Journal of Medical Internet Research*, 23(12):e27613, Dec 2021. [IF-7.08] [Link](#)

[2] Md. Saddam Hossain Mukta, **Ahmed Shahriar Sakib**, Md. Adnanul Islam, Mohammed Eunus Ali, Mohiuddin Ahmed and Mumshad Ahamed Rifat, "Friends' Influence Driven Users' Value Change Prediction from Social Media Usage", 2021 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (*SBP-BRiMS 2021*) [PDF](#)

## Standardized Test Score

---

International English Language Testing System (IELTS)

August, 2021

Overall	Listening	Reading	Writing	Speaking
7.5	7.5	7.0	7.0	7.5

## Technical Skills

---

<b>Programming Languages</b>	: Python, JavaScript
<b>Big Data &amp; Machine Learning</b>	: Tensorflow, Pytorch, Scikit-learn, PySpark, Pandas, Plotly, NLTK etc.
<b>Back-End Technologies</b>	: Django, Django Rest Framework, Flask, FastAPI
<b>Front-End Technologies</b>	: HTML5, CSS, Bootstrap
<b>Database</b>	: Oracle, PostgreSQL, MySQL, MongoDB, Firebase
<b>Tools &amp; Technologies</b>	: AWS, Azure, Git, Docker, Jenkins
<b>Additional Skills</b>	: ETL, Web scraping & automation (Scrapy, selenium), LaTeX

## Featured Projects

---

**BDNewsToday** – [Play Store](#) | *Python, Android (java), Django, Scrapy, MySql, MongoDB, Firebase*

- A News Aggregator mobile application that crawls news from most popular local newspapers (15+ websites/hour) and Youtube News channels. It uses Scrapy-Django integration as a backend API
- Implemented a cron job to automate the data scraping process and Firebase Cloud Messaging for push notifications

**PulsePoint Data Analytics** – [GitHub](#) | *Scikit-learn, Pandas, Folium, Plotly, Geopy*

- Developed an ETL pipeline that scrapes data from PulsePoint web logs along with a monitoring dashboard using selenium, Django, Bootstrap, GCP, and third-party APIs and implemented a cron job to automate the scraping process
- Performed data cleaning & preprocessing, feature extraction, extensive geospatial & time series analysis and applied few clustering algorithms (K-means, HCA)

**BD Medicine Analytics** – [GitHub](#) | *Scrapy, Django REST Framework, PostgreSQL, Plotly, Seaborn*

- Developed a Scrapy-Django PostgreSQL integrated API with Proxy IP configuration that scrapes all medicine data from Bangladesh (30k+ pages).

**Twitter Celebrity Matcher** – [GitHub](#) | [Streamlit App](#) | *Scikit-learn, Tensorflow, Pandas, , Seaborn, Optuna*

- Built a pipeline that finds most similar Twitter celebrity users by applying Semantic Textual Similarity on over 900+ users' 2.5 million+ scraped tweets utilizing BERT and FastAPI.

**Customer Churn Prediction** – [GitHub](#) | [Streamlit App](#) | *Scikit-learn, Scipy, Pandas, Plotly, Seaborn, Optuna*

- Presented an extensive exploratory data analysis of the IBM telco customer churn imbalanced dataset and implemented various statistical hypotheses tests using pandas, scipy, seaborn, plotly etc.
- Performed single level Stacking Ensemble with Triple Gradient boosting algorithms (XGBoost, CatBoost, LightGBM) and tuned hyperparameters of all models using Optuna

**Seradam** – [GitHub Repository](#) | *Python, Django Rest Framework, React js, MongoDB*

- A meta-search platform where users can track prices & see a comparison list of prices of products from various e-retailers
- Automated the data scaping process from popular local e-commerce sites using bs4 integrated API

**Hotel Review Classification** – [GitHub](#) | *Scikit-learn, Tensorflow, FastAPI, Pandas*

- Built multiple text classification models utilizing TF-IDF, CountVectorizer, Tf-Hub word-embedding models, LSTM, XGBoost etc.
- Tuned the models' hyperparameters and created a dockerized REST API

[Full project list available here](#)

## Certifications

---

1. **IBM Machine Learning Professional Certificate** : [View Credential](#)
2. **IBM Data Science Professional Certificate** : [View Credential](#)
3. **SQL for Data Science by UCDAVIS** : [View Credential](#)

## Leadership

---

**Co-founder and Tech Lead****November 2019 – Present***Startup - Softaholik*

- Our first product, **BDNewsToday** which is a Bangla News aggregator mobile Application that has been downloaded over **12 thousands** (as of January 2022) in Google Play Store (**4.6** ratings) and has more than 1 thousand daily visitors
- Providing services including web scraping, automation, ETL, web, and API development, data analytics & dashboard

## Achievements

---

**Kaggle Master** –

- Kaggle Notebooks Master - [View Notebooks](#)

**Conference**

- Presented paper at International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation ([SBP-BRiMS 2021](#))