Arman Sakif Chowdhury

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Technical Skills

Data Management: Data Acquisition, Data Preparation, Data Cleansing, ETL.
Data Science & Analytics: Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, Keras, R.
Programming Languages: Python, SQL, C++, C, Java, Dart, Bash.
Data Engineering & Analytics Solutions: Azure Databricks, Apache Spark, Microsoft Fabric.
Data Visualization & Reporting: Power BI, Tableau, Snowflake, Matplotlib, Seaborn.
Frontend: HTML, CSS, JavaScript, React, Node.js, and Flutter
Backend & Web Technologies: Django, Flask, MongoDB, SQL, Selenium, BeautifulSoup, JSON.
Tools & Platforms: Git, Jupyter Notebook, Google Colab, Databricks, AWS, Azure, Postman.

Education

Master of Applied Computing (AI Stream) Sep 2024 – Present
University of Windsor, Windsor, ON

- Completed two terms with a cumulative average of 85.5%.
- Relevant Coursework: Topics in AI, Natural Language Proc. and Understanding, Advanced Database Topics.
- Seeking a 4 to 8 month internship starting in September 2025. Degree completion directly after internship.

Bachelor of Science in Computer Science and Engineering Jan 2019 – Jun 2023
Ahsanullah University of Science and Engineering, Bangladesh

Work Experience

AI Solutions and BI Developer Co-op Sep 2025 – Present
FGF Brands, North York, ON

Technologies: Power BI, Databricks, PySpark, SQL

- Designed and published dynamic Power BI dashboards, reports by integrating data from multiple sources, leveraging Copilot for enhanced insights and automation.
- Engineered real-time data ingestion and transformation workflows in Databricks using PySpark, implementing streaming pipelines and scheduling tasks via cron expressions.
- Optimized SQL queries and established JDBC connections between Databricks and external systems to improve query performance and enable seamless data access.

Python Developer Consultant Sep 2023 – Aug 2024
Techscope, New York, USA (Remote)

Technologies: Python, Pandas, JSON and ANTLR

- Developed scalable Python applications for data processing, transformation and analysis and regularly was involved in cleaning and preparing data after acquisition.
- Devised SQL-based data ETL (Extract, Transform, Load) pipelines to optimize data processing workflows on a transactional database of over 100,000 entries.
- Performed comprehensive unit testing using Python's `unittest` framework, reducing error rates by 25%, enabling early bug detection, and enhancing software reliability.
- Engaged with clients directly to gather requirements, analyze business processes, and integrated them into team sprints to facilitate collaboration.

Back-End Developer & Customer Support May 2020 – Aug 2023
ProyogLab, Dhaka, Bangladesh

Technologies: React, Node.Js, Python, Power BI, and Data Warehouse

- Provided hands-on technical support to customers, assisting with Arduino-based hardware projects and troubleshooting embedded systems issues.
- Managed day-to-day sales operations in a startup retail environment, helping scale product distribution from hobbyist kits to educational bundles.
- Played a key role in transitioning company to an online model, contributing to website architecture and backend functionality, including visual dashboard using modern web technologies.
- Developed and maintained backend systems for e-commerce operations, including inventory management, order processing, and data integration. Generated monthly reports using Power BI tools to report progress.

Publications

Tackling Fake News in Bengali: Unraveling the Impact of Summarization vs. Augmentation on Pre-trained Language Models 2023

Chowdhury, A. S., Shahariar, G. M., Aziz, A. T., Alam, S. M., Sheikh, M. A., & Belal, T. A. (2023)

arXiv preprint arXiv:2307.06979.

Projects

Predicting Movie Ratings from Plot Summaries Feb 2025 - March 2025
Team Research, University of Windsor, ON

Technologies: Python, Pandas, Pytorch, Scikit-learn, Selenium and BeautifulSoup

- Conceptualized a Large Language Model (BERT) to predict movie success using pre-release data, specifically only using plot summaries as input.
- Utilized two publicly available corpora and created a custom dataset with 17,877 records by scraping the IMDB website, ensuring a comprehensive dataset for analysis.
- Exceeded baseline model performance by 11% with our 81% F1-score and deployed the optimized model on Huggingface Spaces for seamless accessibility and evaluation.

Mitigating Bias in Natural Language Understanding using GNN Sep 2024 - Dec 2024
Team Research, University of Windsor, ON

Technologies: Python, Pandas, Pytorch, Scikit-learn, and Kagglehub

- Formulated a Graph Neural Networks (GNN) model to mitigate racial bias in natural language understanding by either removing less correlated sensitive attributes or assigning lower weights to them.
- Demonstrated the feasibility of building a computationally expensive model on low-resource platforms by utilizing only a CPU on Google Colaboratory.
- Maintained competitive performance by achieving 87.47% accuracy, closely matching state-of-the-art models (91%) that do not employ data anonymization.

Bengali Fake News Detection Aug 2022 - Aug 2023
Team Research, Ahsanullah University, Bangladesh

Technologies: Python, Pytorch and Huggingface Gradle

- Collaborated with a team of four and two supervising faculty members to research Fake News Detection in a low-resource language (Bengali).
- Applied NLP techniques such as data augmentation and summarization to fine-tune a BERT model, achieving performance improvements over existing models.
- Served as lead author for a journal paper, currently under revision for publication in a Q2-ranked journal.

Churn BigML: Telecom Customer Churn Prediction Feb 2023 - May 2023
Team Research, University of Windsor, ON

Technologies: Python, Scikit-learn, Churn Prediction, Correlation Analysis, Anomaly Detection

- Implemented a machine learning model to predict telecom customer churn, helping companies retain customers and reduce churn rates.
- Analyzed telecom customer data (Churn BigML dataset) with 3333 instances and 16 features using various machine learning algorithms including KNN, SVM, LR, RF, Adaboost, LGBM, GradientBoosting, and XGBoost.
- Achieved high accuracy rates with LGBM and XGBoost models, both reaching 95.74
- Identified the most important features impacting churn prediction using feature importance analysis.

Related Technical Training

Agile Foundations – The Rise of Knowledge Workers (LinkedIn Learning) Jan 2025

- Acquired hands-on understanding of Agile principles, Scrum roles, and iterative development, emphasizing team collaboration, adaptability, and continuous improvement in dynamic, knowledge-driven environments.

Flutter and Dart – The Complete Guide Oct 2024
Academind by Maximilian Schwarzmüller (Udemy)

Ultimate AWS Certified Solutions Architect (Udemy) Jun 2024

- Gained experience in designing and deploying scalable, secure, and cost-effective AWS cloud solutions and became familiar with services slike EC2, S3, Lambda, RDS and IAM.

Spark and Python for Big Data with PySpark (Udemy) Oct 2023

- Enhanced proficiency in distributed computing, data wrangling, optimization techniques for big data workflows, and overall knowledge on processing and analyzing large-scale datasets

100 Days of Code: The Complete Python Pro Bootcamp (Udemy) Sep 2023

- Strengthened Python programming skills through hands-on projects covering automation, web development, and data science while using libraries like Flask, Pandas, Selenium, and TensorFlow for real-world applications.

Extracurricular Activities

VentureU Bootcamp Feb 18-22, 2025
Office of Innovation, Partnerships and Entrepreneurship, University of Windsor, ON

- Benefited from expert-led 5-day-long bootcamp, enhancing problem-solving capabilities and fostering the development of practical, applicable solutions.
- Participated in team-based problem-solving and demonstrated presentation skills through competitive pitch competitions, demonstrating the ability to effectively communicate complex ideas.

Event Volunteer Oct 2024 - Present
University Community Church, Windsor, ON

- Assisted with setup, serving, dishwashing and cleanup of Sunday meals for students.

International Students Mentor Dec 2024 - Jan 2025
International Student Centre, University of Windsor, ON

- Mentored 15 international students at the University of Windsor by answering questions and assisting with transition.