MD ANIS SARKER

(+880) 18140-85724 | anissarker603@gmail.com | ansarker.github.io | gscholar/ansarker

EDUCATION

Independent University, Bangladesh *2015 - 2019*
Bachelor of Science, Computer Science CGPA: 3.14/4.00
Thesis: Land Use and Land Cover Segmentation of RGB Satellite Images using Deep Neural Network

Harvard International College, Dhaka, BD *2013*
Higher Secondary Certificate, Science GPA: 4.90/5.00

Kalachandpur High School, Dhaka, BD *2011*
Secondary School Certificate, Science GPA: 4.81/5.00

RESEARCH AND INDUSTRY EXPERIENCE

Acme AI (TrackBox) October 2025 - Continue
Full Stack Developer *Dhaka, BD (Belgium)*

Engineered sophisticated annotation and calibration tools using OpenCV and React, implementing complex homography transformations, 2D field mapping, and tactical camera configurations to ensure precise player tracking and spatial data accuracy.
Architected a robust backend using Flask, PostgreSQL, and SQLAlchemy, managing secure Google Cloud Storage (GCS) integrations, automated database migration workflows, and high-performance API endpoints for real-time data processing.
Developed responsive, data-intensive interfaces in Angular and React, implementing advanced features like RxJS patterns, Pan/Zoom toolbars with coordinate-clamping logic, and complex JSON-driven configuration tools to synchronize frontend state with backend CV models.

Center for Computational and Data Sciences, IUB May 2019 - December 2021 | August 2025 - Continue
Research Assistant *Dhaka, BD*

Developed deep learning models for **urban categorization** in collaboration with the University of Tokyo and United Nations University. Led a team in satellite image segmentation, creating a dataset for Dhaka city. Conducted geospatial analysis using QGIS and applied deep learning for **land use and land cover** segmentation. Created a disaster response prototype, using deep learning to identify **salient features** for improved management.

Neuronyx AI February 2025 - Continue
Artificial Intelligence Engineer *Dhaka, BD*

Building a **Chatbot** for customization food ordering powered by large language models.

Bista Solutions Inc. June 2024 - January 2025
Machine Learning Engineer *Dhaka, BD*

Built a **Copilot solution** for ERP systems that translates natural language queries into SQL and ORM code using LLMs, streamlining data access and analysis. Collaborated with stakeholders to align ML solutions with business goals, enhancing ERP usability and efficiency.

AinoviQ IT Ltd. February 2022 - May 2024
Artificial Intelligence Engineer, Team Lead *Dhaka, BD*

Developed and implemented **GAN** models for training, testing, and deployment as part of the **Virtual Try-On** solution. Conducted a thorough literature review to identify optimal models and methods. Collected clothing data using Python-based web scraping tools and created tailored datasets for background removal, pose estimation, and keypoint extraction. Integrated the GAN models into an **MLOps** pipeline using PyTorch for efficient training, evaluation, and deployment. Deployed the solution via Flask, providing API-based access to the try-on model.

Independent University, Bangladesh 2018 - December 2021
Student Researcher *Dhaka, BD*

Satellite data to develop deep learning models for Building Categorization
*Supervised by **Dr. AKM Mahbubur Rahman**, **Prof. Ryosuke Shibasaki (University of Tokyo)***

Remote Sensing Data to Develop Deep Learning Models for Land Use Land Cover Semantic Segmentation
*Supervised by **Amin Ahsan Ali, PhD**, and **Dr. AKM Mahbubur Rahman***

PUBLICATIONS

BOLM high resolution land use and land cover dataset and benchmark results for the rapidly developing City of Dhaka Bangladesh, Scientific Reports, Nature, 2025 [Link]

BD Open LULC Map: High-resolution land use land cover mapping & benchmarking for urban development in Dhaka, Bangladesh [Link]

Applying State-of-the-Art Deep-Learning Methods to Classify Urban Cities of the Developing World; Sensors Journal, MDPI, 2021. [Link]

A Novel Disaster Image Data-set and Characteristics Analysis using Attention Model, ICPR, 2021. [Link]

Deep-learning coupled with novel categorization method to classify the urban environment of the developing world, International Conference on Signal Processing and Machine Learning, 2021. [Link]

LULC Segmentation of RGB Satellite Image Using FCN-8, SLAAI, 2019. [Link]

TEACHING

Teaching Assistant

Independent University, Bangladesh CSC317: Numerical Method: Autumn 2018
Independent University, Bangladesh CSC203: Data Structure: Summer 2018
Independent University, Bangladesh CSC101: Introduction to Computer Programming: Autumn 2016

SKILLS

Programming Languages: Python, C++, JavaScript, Java, SQL
Libraries & Frameworks: PyTorch, TensorFlow, OpenCV, NumPy, Pandas, Scikit-learn, Matplotlib, FastAPI, Flask, ReactJS, Angular
Geospatial Tools: QGIS, Google Earth Engine, GeoPandas, GDAL
Cloud Platforms: Google Cloud Platform, Amazon Web Services
Web Scraping: Scrapy, Selenium
Development Tools: Git, Docker, Bash, VS Code
Applied Skills: MLOps, Exploratory Data Analysis (EDA), Image Processing, Data Scraping
Professional Skills: Project Management, Research Facilitation, Documentation, Report Writing

RESEARCH INTERESTS

Machine Learning, Deep Learning, Computer Vision, Remote Sensing, GIS, and Environmental Applications

LANGUAGE SKILLS

Language	Proficiency Level
Bengali	Native speaker
English	**IELTS: 6.5**

PROJECTS

Odoo Copilot: Natural Language-Driven ERP Analytics
Role: Machine Learning Engineer

Engineered an AI-driven assistant for Odoo ERP, enabling users to input natural language queries and receive actionable insights. Leveraged large language models (LLMs) via LangChain to convert user inputs into ORM code, facilitating seamless database interactions. Designed and implemented dynamic data visualizations—including pie charts, bar graphs, line charts, and tree maps—to present query results effectively. This solution enhanced decision-making processes and operational efficiency within the ERP system.

DropDead Gorgeous: Virtual Makeup Room
Role: Artificial Intelligence Engineer, Team Lead

Developed a virtual makeup room, allowing users to try various makeup styles on a woman's face in real-time. Integrated advanced computer vision techniques to map makeup products like lipstick, eyeshadow, blush, and foundation onto facial features. The platform provides a seamless, interactive user experience for makeup trials.

Urban Categorization with Deep Learning
Role: Research Assistant

Created a tailored satellite image dataset covering all of Dhaka city, later expanded for testing across Bangladesh. Trained and evaluated deep learning models (e.g., DeepLabV3+) for land use and land cover segmentation. Applied geospatial analysis with QGIS and led a team in developing labeled segmentation data. The project supported collaborative research with the University of Tokyo and United Nations University.