

OVI PAUL

Address: Dhaka, Bangladesh

Email: ovipaulcs@gmail.com || opaul@mtu.edu

Website: ovipaul.github.io

EDUCATION

Independent University, Bangladesh(B.Sc)

2015-2020

Major- Computer Science and Engineering

Minor- Economics

St. Joseph Higher Secondary School

2014

Group - Science

TECHNICAL SKILLS

- **Programming Language:** Python, C++, Java, Javascript
- **Frameworks:** Pytorch, Electron, Bootstrap, Streamlit
- **Library:** OpenCV, GDAL, Numba, Scikit-Learn, Matplotlib
- **GIS Tools:** QGIS, eCognition, SNAP, ArcGIS, SAS Planet
- **Other Tools:** Latex, Git, Anaconda, SCP, SSH, TMUX, Matlab

RESEARCH EXPERIENCE

Artificial Intelligence and Cybernetics Lab

Research Assistant(Full-Time)

Feb. 2020 to Current

- Working with state of the art Deep Learning models, analyzing the whole architecture and finding ways to optimize the system to obtain better result.
- Collecting satellite and aerial images and creating ground truth for it.
- Developing the pre-processing and post-processing procedure for the data-set.
- Creating pipelines for the whole procedure and doing continuous integration and maintenance.
- Staying up-to date with recent publications of the relevant field.
- Writing scientific papers and documentations.

INTERNSHIP

Monster Lab

Web Developer

Dhaka, Bangladesh

Sep. 2019 to Dec. 2019

- Created responsive front-end using HTML5, CCS3, Bootstrap, JavaScript, and jQuery.
- Worked on MongoDB database concepts such as locking, transactions, indexes, replication, schema design.
- Configured and deployed the applications onto Apache application servers

TEACHING AND MENTORING EXPERIENCE

Light of Hope

Coding Instructor(Part-Time)

2021 - Currently

- Teaching introductory programming lessons to Data Analysis, Game Development and Web Development
- Preparing and delivering lesson plans and instructional materials that facilitate active learning
- Developing schemes of work, lesson plans and tests that are in accordance with established procedures
- Instructing and monitoring students in the use of learning materials and equipment

Artificial Intelligence and Cybernetics Lab

Research Assistant

2020

- Mentored 2 undergraduates in their day-to-day lab activities
- Helping to get started with Python programming language
- Teaching python libraries like numpy, matplotlib and scikit-learn
- Teaching tools like Git, SSH, GIS softwares
- Helping with any coding problem or issue
- Providing feedback on their work

Independent University Bangladesh

Teaching Assistant

2016 to 2019

- Courses Assigned were- CSC101 - Introduction to Programming, CSC204 - Data Structure, CSC317 - Numerical Method
- Taking lab classes and extra coding classes on C++ and Matlab
- Preparing questions for quiz and assignments
- Marking quiz and assignments
- Helping students outside the class for the respective courses.

ACHIEVEMENT

Intra IUB Programming Contest <i>Winner</i>	IEEE 2018
ICPC Asia Dhaka Regional Contest <i>Regional Qualifiers</i>	ACM 2018
Makers' Mania 2018(QuadCopter) <i>2nd Runner Up</i>	IUB 2018
ICPC Bangladesh IUBAT NCPC <i>Regional Qualifiers</i>	ACM 2018
IEEE Day Programming Contest 2017 <i>Winner</i>	IEEE 2017

CONFERENCE PRESENTATIONS

International Conference on Bangla Speech and Language Processing <i>- Image Pre-processing on NumtaDB for Bengali Handwritten Digit Recognition</i>	ICBSLP Sep.2018
--	---------------------------

PUBLICATIONS

- **O. Paul**, ABS Nayem, A. Sarker, Md.A. Amin, A.A. Ali, AKM M. Rahman, "Remote Sensing Data Analysis on Bangladesh using Deep Learning".(Proceedings)
- Q. Cheng, AKM M. Rahman, A. Sarker, ABS Nayem, **O. Paul**, A.A. Ali, Md. A. Amin, R. Shibasaki, M. Zaber, "A Deep-learning framework customized for novel categorization method to classify cities of the developing world," Sensors Journal, MDPI, 2021.(Proceedings)
- F.F. Niloy, Arif, ABS Nayem, A. Sarker, **O. Paul**, Md.A. Amin, A.A. Ali, AKM M. Rahman, "A Novel Disaster Image Data-set and Characteristics Analysis using Attention Model," 25th International Conference on Pattern Recognition (ICPR), Milano, Italy, 2021.
- Q. Cheng, AKM M. Rahman, A. Sarker, ABS Nayem, **O. Paul**, A.A. Ali, Md. A. Amin, R. Shibasaki, M. Zaber, "Deep-learning coupled with novel categorization method to classify the urban environment of the developing world," 2nd International Conference on Signal Processing and Machine Learning (SIGML 2021), Zurich, Switzerland, 2021.
- ABS Nayem, A.Sarker, **O. Paul**, A. Ali, Md. A. Amin, AKM M. Rahman, "LULC Segmentation of RGB Satellite Image Using FCN-8," 3rd SLAAI-International Conference on Artificial Intelligence (ICAI), Belihuloya, Sri Lanka, 2019.
- **O. Paul**, "Image Pre-processing on NumtaDB for Bengali Handwritten Digit Recognition," 2018 International Conference on Bangla Speech and Language Processing (ICBSLP), Sylhet, Bangladesh, 2018.

PROJECTS

- **Enigma Simulator** An encryption device used in the World War II made using Python and Streamlit.
- **Zenith** A high level Python library made with PYPI. It's a tool for data manipulation and processing in Python ecosystem.
- **Crime Map** A web based heat map which showed in which regions crimes like mugging happened. It was implemented using javascript, nodejs and openstreetmap api.
- **Locate Me** A web based location sharing app built using node.js and mongodb on the backend.
- **Character Extractor** A tool to extract characters from paragraphs from image data made using Matlab.

PROFESSIONAL AFFILIATION

ReScience C <i>Reviewer</i>	2021 - Current
Institute of Electrical and Electronics Engineers(IEEE) <i>Former Student Member</i>	2018 - 2019

RELEVANT COURSES

- Artificial Intelligence
- Image Processing
- Software Engineering

EXTRACURRICULAR ACTIVITIES

- Volunteered for 5th International Conference on Advances in Electrical Engineering (ICAEE).
- Organized programming contest as part of the IEEE club.
- Organising competitive programming classes as part of the IUB ACM Student Chapter.
- Writing blogs related to computer science.