

# MASHIAT MUSTAQ

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🌐 mashiاتمportfolio.netlify.app/

in mashiاتم-mustaq-58691415b

🔗 Mashiatmm

## RESEARCH INTERESTS

Computer Graphics Visualization 3D Computer Vision Animation

## EDUCATION

### Ph.D. in Computer Science

Purdue University

Aug 2024 – Present

Advisor: Dr. Xavier Tricoche

Taken Courses : Interactive Computer Graphics Data Communication & Computer Networks

### Bachelor of Science in Computer Science & Engineering

Bangladesh University of Engineering & Technology

March 2018 – May 2023

Rank : 4/129; CGPA : 3.96/4.0

Notable Courses : Computer Graphics Linear Algebra Machine Learning Simulation & Modelling Compiler  
Software Engineering Computer Security Computer Networking Artificial Intelligence Operating System  
Bioinformatics Computer Architecture Microprocessor, Microcontroller & Embedded Systems

## WORK EXPERIENCE

### Graduate Teaching Assistant, Purdue University

August 2024 – December 2024

Course: CS 10100 - Computer Literacy, Department of Computer Science

### Lecturer, CSE Dept., Bangladesh University of Engineering & Technology

October 2023 – July 2024

Theory Course Instructor : Computer Programming (C/OOP)

Sessional Instructor : Computer Programming (C/OOP), Embedded Systems & Interfacing, Software Programming

### Adjunct Lecturer, CSE Dept., Bangladesh University of Engineering & Technology

June 2023 – October 2023

Sessional Instructor : Database, Object Oriented Programming & Computer Networking

Highlights : [Lectures for NS-3 beginners](#)

### Software Engineer, Sedbox, Canada

Computer Vision Google API

June 2021 – December 2021 (Remote)

Automated website interaction extracting ROIs using OpenCV in an R&D project and extracted data using google APIs for feeding into a prediction model.

## RESEARCH EXPERIENCE

### Identification Of Dengue Breeding Places From Aerial Images

Image Processing 3D Object Detection

Supervised by : Dr. Anindya Iqbal, Dr. Manzur Murshed.

June 2023-Present

# Machine Learning for Early Detection and Progression Prediction of Alzheimer's Disease: A Multi Polygenic Risk Score Approach

Bioinformatics

Machine Learning

Data Analysis

Authors : **Mashiat Mustaq**, Naeem Ahmed, Sazan Mahbub, Clara Li, Yuichiro Miyaoka, Julia TCW, Shea J Andrews, Md. Shamsuzzoha Bayzid

May 2022- November 2023

[\[medRxiv\]](#)

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## Development of Flood Forecasting System for Someshwari-Kangsa Sub-watershed of Bangladesh-India Using Different Machine Learning Techniques

Machine Learning

Authors : Hamidul Haque, Mushtari Sadia, **Mashiat Mustaq**

Poster presentation, EGU General Assembly 2021 [\[Link\]](#)

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## TECHNICAL SKILLS

- **Programming Languages:** C/C++, C#, Python, Javascript, x86 Assembly, MySQL, Bootstrap, Bison, Flex, Bash
- **Tools & Frameworks:** NS-3, PyTorch, Keras, Django REST, ReactJS, Git, Oracle DBMS, LaTeX
- **Libraries:** OpenGL, OpenCV, pygame, Sklearn, Pandas, Matplotlib, Seaborn, Matteredjs
- **Software:** Unity, Git, Wireshark, Navicat, MS Office, Adobe Photoshop, Adobe Illustrator.

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## COMPETITIONS & ACHIEVEMENTS

### 1st Runners Up - Microsoft Azure Virtual Hackathon 2022

*Built a dengue forecast system that predicts the number of dengue cases in any given region.*

### Champion - HerWill Datathon 2022

*Forecasted taxi demand using machine learning & data analysis.*

### 2nd Runners Up - UNDP Women's Hackathon 2021

*Built a Dengue Control and Monitor System.*

### Participations

- Robi Datathon 2.0 - Top 25 teams - A datathon on drawing various insights from data.
- Ada Lovelace Datathon - Top 5 teams - A datathon on a machine learning problem.
- Dhaka AI 2020 - Top 20 teams - Solved an object detection problem.

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## HONORS & AWARDS

### Honda Y-E-S Award 2022

*Given to four students in Bangladesh with prize money of \$3000 based on merit and extra-curricular skills.*

### Grace Hopper Celebration Scholar '21

*Given only to a few for attending a worldwide conference for women from stem background*

### Dean's List, University Merit List

*Recipient of both Scholarship for the year 2019, 2020, 2021, 2022 for academic excellence.*

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## LEADERSHIP EXPERIENCES

### Lead, Agami Library Project

September 2019 – Present

Established a library system in eight schools of Bangladesh for around 2000 underprivileged students by managing a team of 30 volunteers. Prepared annual budgets, proposals for executing the project.

[Website](#)

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## REFERENCES

**Dr. Xavier Tricoche, Associate Professor**

Department of Computer Science, Purdue University  
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**Dr. Anindya Iqbal, Professor**

CSE Department, BUET  
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