



SHIHAB MUHTASIM

Date of birth: 03/09/2003


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 [shihabmuhtasim](https://github.com/shihabmuhtasim) (Github)

ABOUT ME

Erasmus Mundus Joint Master's student specializing in computer vision and image processing, with prior experience in machine learning and an interest in software engineering. Experienced in building practical, data-driven systems through academic projects and research.

EDUCATION AND TRAINING

Interested Fields

3D reconstruction, Imaging, Computer Vision, Computer Graphics, Artificial Intelligence, Network Science, Natural Language Processing, Machine Learning.

09/2025 – CURRENT Budapest, Madrid and Bordeaux

Master of Science in Artificial Intelligence for Image Processing and Computer Vision Erasmus Mundus Joint Master's Programme (IPCVAI)

Mobility structure:

- Sep 2025 - Jan 2026 – [Pázmány Péter Catholic University, Budapest, Hungary](#)
- Feb 2025 - May 2026 – [Universidad Autónoma de Madrid \(UAM\), Madrid, Spain](#)
- Sep 2026 - Jan 2027 – [University of Bordeaux \(UBx\), Bordeaux, France](#)
- 6 months – Internship in academia or industry

Website <https://ipcv.eu/> | **National classification** 7 | **Type of credits** ECTS |

Number of credits 120

01/06/2021 – 20/11/2024 Dhaka, Bangladesh

Bachelor of Science in Computer Science and Engineering BRAC University

Final grade CGPA: 4.00/ 4.00 | **Number of credits** 136

Link https://bit.ly/bracu_course_curriculum

WORK EXPERIENCE

BRAC University Dhaka, Bangladesh

Business or Sector Education | **Department** CSE | **Website** <https://www.bracu.ac.bd/>

Link https://cse.sds.bracu.ac.bd/faculty_profile/419/shihab_muhtasim

Adjunct Lecturer

01/02/2025 – 06/2025

Roles: Delivered undergraduate-level lectures in courses such as Data Structures, OOP, OS, Microprocessors, and AI. Designed and evaluated assignments, quizzes, and examinations, supervised student projects, and provided academic mentoring.

BRAC University Dhaka, Bangladesh

Business or Sector Education | **Department** CSE

Link <https://bit.ly/4iNz6YX>

Teaching Assistant

01/10/2023 – 29/08/2024

Roles: Provided 12 hours of weekly consultation to a class of 35 students, assisted with 3 hours of lab sessions each week, graded assignments, evaluated student progress, conducted viva assessments, and administered final lab exams.

HONOURS AND AWARDS

2025 European Commission

Erasmus Mundus Scholar

Selected for multiple Erasmus Mundus Joint Master's (EMJM) programs in 2025, among thousands of global applicants. Each selection included a fully funded scholarship from the European Commission under the Erasmus+ framework. The programs I was awarded scholarships for include:

- [IPCVAI – Artificial intelligence for Image Processing and Computer Vision](#)
- [CoDas – Communications Engineering and Data Science](#)

• **EMJM Imaging – Imaging**

02/2025 BRAC University

Chancellor's Gold Medalist

Chosen as the chancellor's gold medalist out of 4600 graduates at the 16th convocation of BRAC University as the top graduate.

Link <https://bit.ly/3LWax09>

2025 BRAC University

Valedictorian of the 16th Convocation

Selected to represent the graduating class and deliver the valedictorian speech.

Link <https://www.youtube.com/watch?v=YoLNCLtIU-c>

RESEARCH PROJECTS

01/2026 – CURRENT

Review and evaluation of the current state of the art on 3D reconstruction based on NeRFs.

Tutored Research Development Project on Neural Radiance Fields (NeRFs), involving the study and evaluation of existing NeRF-based methods, implementation and experimentation on suitable datasets, and analysis of performance to support benchmarking and reproducible research with a possibility of extending the project to include some improvements.

2023 – 2024

Analyzing and Predicting Trends in Contemporary Social Discourse through Hashtag

Analyzed social media hashtag popularity by modeling information diffusion and user interaction networks, and predicted trend popularity using time-series forecasting with LSTM, network science, graph theory, and NLP techniques.

Link https://bit.ly/shihab_ieeepaper

2025

Polyp Segmentation and Identification from Endoscopic Images Using Deep Learning

Proposed a deep learning-based approach for automatic colorectal polyp segmentation in endoscopic images, evaluating convolutional and transformer-based models on the Kvasir-SEG dataset to improve detection accuracy. I have co-supervised this research project.

Link <https://bit.ly/4qtEV0T>

PROJECTS

Bingo Detection – Image Processing Model

Developed a MATLAB-based system to detect and validate Bingo patterns from card images by correcting rotation, detecting stamped cells, digitizing the grid, and verifying Bingo rules using classical image processing techniques.

Link <https://github.com/shihabmuhtasim/Bingo-Detection-Image-Processing-Model>

Drone Image Restoration and Segmentation

Implemented an image restoration and segmentation pipeline for drone imagery using Richardson–Lucy deconvolution and Wallis filtering, followed by texture-based segmentation with Laws filters to classify terrain and localize vehicles.

Link <https://github.com/shihabmuhtasim/Drone-Image-texture-segmentation-and-car-detection>

APS Failure Prediction – Scania Trucks

Developed a machine learning-based predictive maintenance system to identify Air Pressure System (APS) failures in heavy-duty trucks using high-dimensional sensor data, with emphasis on data preprocessing, feature selection, and classification.

Link <https://github.com/shihabmuhtasim/Prediction-of-APS-Failure-in-Scania-Trucks>

PatternCraft – Design Patterns

Designed a portfolio of modular software solutions implementing core GoF design patterns, demonstrating clean architecture and extensible design through multiple real-world inspired assignments.

Link <https://github.com/shihabmuhtasim/Pattern-Craft---Design-Patterns>

SKILLS

PROGRAMMING LANGUAGES & WEB DEVELOPMENT

Python | MATLAB | Java | C++ | C | Laravel | React | HTML | JavaScript | CSS | SQL | MySQL | PHP

LIBRARIES & OTHERS

Linux | NetworkX | TensorFlow | OpenGL | Pandas | SciPy | Keras | OpenCV | H5py | Git/ GitHub | Pillow/PIL | Transformers | Scikit-learn | PyTorch | Git | NumPy | Matplotlib | NLTK | Tkinter | Scikit-image