

Md Abdullah Al Mazid

Miami, Florida | mazid.rafee@gmail.com | (786) 257-7354 | LinkedIn - MAA Mazid | GitHub - MAA Mazid

Google Scholar - MAA Mazid | Website - MAA Mazid

Research and Work Experience

-
- Research Assistant**, FIU HPDRC Lab – Miami, FL August 2022 – Present
- Collaborating under supervision of Dr. Naphtali Rishe in the High Performance Database Research Center (HPDRC Lab) at FIU, focusing on developing tools for data management, AI integration, and web applications to handle highly diverse datasets.
 - Engaged in projects (BBROIPS) for visualization, simulation, and AI-driven analysis to enhance understanding of environmental data, particularly for South Florida, funded by FDEP and NSF.
 - Conducting PhD research in machine learning, with a focus on deep learning techniques to process and analyze diverse spatial and temporal datasets, including time series, remote sensing, and environmental data.
- Senior Software Engineer**, Enosis Solutions – Dhaka, Bangladesh June 2019 – August 2022
- Held the role of software engineer for two years and senior software Engineer for one and a half years at Enosis Solution, contributing to development of Denticon, a cloud-based dental software (SaaS) for Planet DDS and one of the most widely used in the US dental industry.
 - Led product development and managed a sub-team, ensuring high-quality standards in alignment with evolving technological and business requirements, particularly in enterprise-level software systems, legacy system modernization, and query optimization.
- Software Engineer Intern**, mPower Social Enterprises – Dhaka, Bangladesh May 2019 – June 2019
- Developed solutions using Python and the Django framework at mPower Social Enterprises Limited.

Education

-
- Florida International University**, PhD in Computer Science August 2022 – Present
- Florida International University**, Master's in Computer Science August 2022 – July 2024
- Khulna University of Engineering and Technology**, BS in Computer Science April 2014 – March 2019

Research and Publications

-
- MSCloudCAM: Cross-Attention with Multi-Scale Context for Multispectral Cloud Segmentation** 2025
- Developed MSCloudCAM, a multispectral and multi-sensor deep learning model integrating Vision Transformer Backbone, multi-scale context modules, and cross-attention for accurate 4-class cloud segmentation. Achieve state-of-the-art performance on Sentinel-2 (CloudSEN12) and Landsat-8 (L8Biome) datasets, surpassing leading segmentation models. (Accepted in IEEE CAI 2026)
- Object Saliency Ranking Beyond Pixels with Structured Linguistic Semantics** 2025
- Developed MSR, a language-conditioned saliency ranking framework aligning caption phrases with object regions to modulate multi-scale visual features without backbone fine-tuning. (Co-author, Submitted in ECCV 2026)
- Addressing Irregularities and Enhancing Forecasting for Water Quality Metrics by Integrating Ordinary Differential Equations with BiLSTM:** 2024
- Objective of this research is to develop machine learning models to handle irregular time series water quality data with spatial and temporal variation (Published in IEEE)
- Climate Change Myths Detection Using Dynamically Weighted Ensemble Based Stance Classifier:** 2022
- Objective of this research was to develop stance classifier to identify problematic posts that agree with misconceptions regarding climate change or global warming (Published in ACM).

Projects

BBROIPS: Working as a researcher and system developer for visualization, simulation, and AI-driven analysis to enhance understanding of environmental data, particularly for South Florida. It was multi agency collaboration between FIU, Biscayne Bay National Parks, Florida Department of Environmental Protection.

DENTICON: Worked for two years as a Software Engineer and one year as a Senior Software Engineer on a legacy project from PlanetDDS. As part of a large team, contributed to modernizing the technology stack and developing the DENTICON ecosystem, now one of the most widely used SaaS platforms in the U.S. dental industry. The ecosystem includes a patient portal, provider portal, payment portal, dental office management system, imaging system, and more. In my final year, led a sub-team to optimize SQL queries and enhance data visualization, overseeing both development and system performance improvements.

Quizify: Developed an web application with machine learning system at back-end to make quiz from texts.

NachOS Analysis: Analyzed operating systems architectures and principle.

Technical Skills

Languages: Python, C++, C#, SQL

Technologies: .NET, Microsoft SQL Server, Keras, TensorFlow, NumPy, Docker, Django

Version Control: Git, TFS

Extracurricular Activities

Onsite Hackathons:

ShellHacks 2022, 2023, 2024, 2025

Onsite Programming Contests:

National Collegiate Programming Contest	2016
IUT 8th ICT Fest	2016
International Collegiate Programming Contest (Dhaka Regional Final)	2015
SUST CSE Carnival	2015
IUT 7th ICT Fest	2015

Online Programming Platforms:

Light OJ: Solved 45+ problems (Handle : Heisenberg)

Sphere OJ: Solved 10+ problems (Handle : rafi_22)

Codeforces: Max Rating - 1405 and Solved 300+ problems (Handle : El_Heisenberg)

HackerRank: Solved 10+ problems (Handle : El_Heisenberg)

Online Courses and Certificates:

Algorithmic Toolbox: Facilitated by Coursera.

Web Application Security with OWASP Top 10 - Advanced: Offered by EduCBA.

Project on OWASP: Web Application Incorporating Vulnerabilities: Facilitated by EduCBA.

Introduction to Software Product Management: Offered by Coursera.

Algorithmic Toolbox: Available through Coursera.

Neural Networks and Deep Learning: Offered by Coursera.

Structuring Machine Learning Projects: Available through Coursera.

Convolutional Neural Networks: Offered by Coursera.