Md Abdullah Al Mazid

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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

Khulna University of Engineering and Technology, BS in Computer Science — April 2014 – March 2019

Research and Publications

MSColudCAM: Deep Cross Attention with Multi-scale Context Network for Multispectral Mult-sensor Cloud Segmentation: 2025

Developed MS-DeepCAM, 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. (Research done, Writing manuscript, Target ICLR 2026)

Look, Attend, and Rank: A Language-Guided Benchmark for Saliency Ranking: 2025

Developed LGSR, a language-guided saliency ranking framework and dataset that integrates gaze data with natural language cues to achieve more accurate and interpretable object saliency rankings. (Co-author, Submitted in AAAI 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 collboration between FIU, Biscayne Bay National Parks, Florida Department of Environmental Prortection.

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 beck-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, TensosFlow, NumPy, Docker, Django

Version Control: Git, TFS

Extracurricular Activities

Onsite Hackathonns:

ShellHacks	2022, 2023, 2024

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.