# Nafiz Ahmed

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• Website

in Nafiz Ahmed

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#### **SYNOPSIS**

Recent graduate with newfound passion for data science and machine learning research. Inspired by final semester course, actively developing relevant skills. Eager to apply budding knowledge to innovative research projects despite limited prior experience.

#### **EDUCATION**

#### American International University - Bangladesh

August 2019- August 2023

B.Sc. in Computer Science and Engineering

∘ GPA: 3.93/4.0 (Transcript **∠**)

o Magna Cum Laude

o Major: Software Engineering

o Undergraduate Thesis: Two proposed Blockchain Models for ERP

### **PUBLICATIONS**

Two Proposed Models for Securing Data Management for Enterprise Resource Planning Systems Using Blockchain Technology ☑

2023

**Nafiz Ahmed**, Anik Kumar Saha, Mustafa Ahmad Arabi, Sheikh Talha Jubayer Rahman, Prof. Dr. Dip Nandi

Contributions:

- o Conceptualization, Methodology, Investigation, Editing & Revision
- Contributed in making 2 possible schemata to integrate Blockchain in an ERP system.

# Deep Learning-Based Natural Language Processing in Human-Agent Interaction: Applications, Advancements, and Challenges

Accepted

**Nafiz Ahmed**, Anik Kumar Saha, Md. Abdullah Al Noman, Jamin Rahman Jim, Md Mohsin Kabir, Dr. M. F. Mridha

Contributions:

- Conceptualization, Methodology, Editing & Revision
- Conducted comprehensive review of 150+ papers on deep learning-based NLP in Human-Agent Interaction, analyzing applications, algorithms, datasets, and key challenges.

# A Systematic Literature Review on Privacy Preservation in Federated Learning

Submitted

Anika Saba Ibte Sum, Zinniya Taffannum Pritee, Anik Kumar Saha, Mirza Asif Mahmud, **Nafiz Ahmed**, Dr. Yong Seok Hwang, Dr. Jungpil Shin, Dr. Kamruddin Nur Contributions:

o Formal analysis, Writing, organization, Validation

#### **SKILLS**

Languages: C#, C++, R, Python, JavaScript, PHP, LaTeX

Frameworks: .NET, Laravel, PyTorch, React

Data Analytics: Pandas, NumPy

Software: Mendeley, Postman, MS Excel, Notion, Figma

Version Control: Git (GitHub)

Typing Speed: 85-90 WPM (Touch typing)

#### EXPERIENCE

#### Research Intern

September 2023- March 2024

Advanced Machine Intelligence Research Lab - AMIR Lab

- Published a survey paper which explored 3 key domains: Natural Language Processing, Deep Learning, and Human-Agent Interaction.
- Integrated feedback from 3 experts, completing 1 major revision for the survey paper.
- o Enhanced academic writing, research gap analysis, and communication skills.
- Led a group of three, demonstrating leadership and collaboration skills.
- o Contributed to weekly research discussions and idea generation.

# Jr. Software Engineer

January 2023-August 2023

Shapla Infosys

- Implemented tailored solutions from stakeholder feedback, boosting project satisfaction by 40%.
- Enhanced NPO user engagement through strategic UI/UX design through implementations of 20+ prototypes which were used by group of three.
- Engineered a responsive front-end using cutting-edge web technologies, achieving a 98% responsiveness score.
- Architected scalable back-end systems to support dynamic content.

#### **SCHOLARSHIPS**

#### Academic Scholarship

2020-2023

Awarded for exceptional academic performance, including:

- Maintaining a CGPA of 3.75 or higher
- $\circ\,$  Completing 30+ credits across Spring and Fall semesters
- o Earning a minimum grade of 'B' in all courses

## ASSESSMENTS

IELTS (Result ♥)

August 27, 2024

Overall Band: 7.5 (Listening: 8.5, Reading: 8, Writing: 6, Speaking: 7)

#### Projects

### ResNet-for-Chest-Xray

ResNet-for-Chest-Xray **∠** 

- ∘ Dataset: COVID-19 Radiography Database 🗹
- Designed and implemented ResNet50 on Chest X-ray.
- o Pre-processed approximately 1.6K Image data to train ResNet50.

Music and Mental Health: KNN Classification of Music Effects

Music & Mental Health
Relation 

✓

- o Dataset: Music & Mental Health Survey Results ☑
- TensorFlow, NumPy, k-Nearest Neighbors (k-NN)
- Refined a 1.7K+ entry music survey dataset through data pre-processing and feature engineering.
- o Developed and trained the KNN model to classify the effect of music on mental health.