

Ismail Hossain

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EDUCATION

University of Texas at El Paso (UTEP)	El Paso, TX
PhD in Computer Science	Aug., 2024 - Present
University of Texas at El Paso (UTEP)	El Paso, TX
MS in Computer Science	May, 2025
Southern Illinois University Carbondale (SIUC)	Carbondale, IL
PhD in Computer Science [Transferred to UTEP]	Aug., 2022 - Aug., 2024
Chittagong University of Engineering & Technology (CUET)	Chittagong, Bangladesh
Bachelor of Computer Science and Engineering	Mar., 2014 - Nov., 2018

EXPERIENCE

Security and Privacy-Enhanced Machine Learning Lab	SUPREME LAB.
Research Assistant [Google Scholar]	Aug. 2022 - Present
<ul style="list-style-type: none">Designed and optimized algorithms for fine-tuning machine learning and deep learning models in applied research.Developed scalable Python code for data preprocessing, feature engineering, and performance-driven simulations.Implemented advanced NLP techniques using LLMs, LoRA, PEFT, and RAG for text and code generation tasks.Integrated and trained models on multi-modal, multi-task datasets using PyTorch and Hugging Face, contributing to published research outcomes.	
Samsung R&D Institute	Dhaka, Bangladesh
Software Engineer	Feb. 2019 - Aug. 2022
<ul style="list-style-type: none">Developed and optimized web application's frontend and backend services for Samsung HQ Engineer.Implemented frontend (Angular) and backend (Spring Boot) features, ensuring high performance and reliabilityDelivered 800+ commits, 100+ PRs, and 300+ code reviews, leading projects and collaborating across global teams.Recognized as a top contributor and selected for a business trip to South Korea for technology transfer.	

PROGRAMMING SKILL

- Solved **1100+** problems on platforms like LeetCode, Codeforces, UVA, HackerRank, and LightOJ.
- Strengthened skills in **algorithm** design and coding efficiency through **hands-on practice**.
- Competed in **ACM ICPC Dhaka Regional 2018** and multiple national **contests**, refining my ability to solve complex challenges under pressure.

AWARDS & ACHIEVEMENTS

Student Travel Award (\$1300)	ICWSM Conference, Buffalo, NY, USA, 2024
Distinguished Student Service Award	Southern Illinois University, Carbondale, 2024
Team rank 16th in the USA and 4th in Illinois	U.S. Dept. of Energy CyberForce Competition, 2022
Outstanding Collaborator Award	Samsung R&D Institute, Bangladesh, 2021
Business Travel Award (\$1000)	Samsung Digital City, Suwon, South Korea, 2020
Winner, Silver Category	Samsung Code Review Contest 2020, Samsung Electronics
Advance Level Certificate	Samsung Global Competitive Programming Contest, 2019

TECHNICAL SKILLS

Language	C, C++, Java, Python, TypeScript
Libraries	Numpy, Pandas, Scikit-learn, NLTK, Matplotlib
Frameworks	PyTorch, Spring Boot, Node.js, Angular
Dataset	RDBMS (MySQL, PostgreSQL), NoSQL (MongoDB)
AI & ML	Supervised/unsupervised learning, Semi-supervised learning, Multimodal learning, LLMs (fine-tuning, PEFT, RAG, reasoning), and NLP (semantic parsing, generation).
Comfortable	Flask, Selenium, Beautiful Soup, R, RStudio
Familiar	Langchain, Databricks, AWS services, Web (Next.js, Express.js, Django), Fire-base, GraphQL

RESEARCH EXPERIENCE

- [IEEE] *Collaborative Differentially Private Federated Learning Framework for the Prediction of Diabetic Retinopathy*
Conference: ICAIC'22
- [IEEE/ACM] *Monitoring Dynamics of Emotional Sentiment in Social Network Commentaries* (Lead Author)
Conference: ASONAM'23, Acceptance Rate: **37%**
- [AAAI] *EMOVIS: A Visual Approach to Tracking Emotional Sentiment Dynamics in Social Network Commentaries* (Lead Author)
Conference: ICWSM'24, Acceptance Rate: **20%**
- [Springer] *SocialRec: User Activity Based Post Weighted Dynamic Personalized Post Recommendation System in Social Media* (Lead Author)
Conference: ASONAM'24, Acceptance Rate: **24%**
- [Springer] *EVOLVE: Predicting User Evolution and Network Dynamics in Social Media Using Fine-Tuned GPT-like Model* (Lead Author)
Conference: ASONAM'24, Acceptance Rate: **24%**
- [Springer Nature] *A Visual Approach to Tracking Emotional Sentiment Dynamics in Social Network Commentaries* (Lead Author)
Journal: Spring Nature 2024
- [PoPETs] *AI-in-the-Loop: Privacy Preserving Real-Time Scam Detection and Conversational Scambaiting by Leveraging LLMs and Federated Learning* (Lead Author)
Conference: PoPETs'26 – Under Review
- [NeurIPS] *LAMDA: A Longitudinal Android Malware Benchmark for Concept Drift Analysis*
Conference: NeurIPS'26 – Under Review
- [ACM] *EVOLVE-X: Embedding Fusion and Language Prompting for User Evolution Forecasting on Social Media* (Lead Author)
Conference: ACM Hypertext'26 – Under Review

MEDIA COVERAGE

SOCIALREC: Revolutionizing Social Media Personalization with Advanced AI, Devdiscourse News, July 2024.
Coverage of: “SocialRec: User Activity Based Post Weighted Dynamic Personalized Post Recommendation System in Social Media ”, ASONAM 2024 submission.