

Md Mosharaf Hossan

Pocatello, Idaho, 83201

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RESEARCH INTERESTS

Human-Computer Interaction, Trustworthy AI, Visualization, Empirical Software Engineering, Cybersecurity, Extended Reality, Machine Learning

EDUCATION

Master of Science in Computer Science | GPA: 3.91/4.0

Idaho State University

May, 2025

Idaho, United States

Bachelor of Science

Khulna University of Engineering & Technology

February, 2018

Khulna, Bangladesh

EMPLOYMENT

Teaching Assistant

Idaho State University

August 2023 – May 2025

Idaho, United States

Mid-Senior Software Engineer

Nimble

May 2023 – July 2023

Bangkok, Thailand

Senior Software Engineer

Sigma Solutions

January 2021 – April 2023

Dhaka, Bangladesh

Software Engineer

Sigma Solutions

March 2019 – December 2020

Dhaka, Bangladesh

Software Engineer

Hyper Systems Ltd.

April 2018 – February 2019

Dhaka, Bangladesh

TEACHING EXPERIENCE

Teaching Assistant

Idaho State University

August 2023 – Present

Pocatello, ID

- Delivered lectures for CS1181 Computer Science and Programming.
- Held office hours to guide students in problem-solving.
- Graded and provided constructive feedback on homework, assignments, and projects.
- Spring, 25: CS3321 Introduction to Software Engineering.
- Fall, 24: CS4412/5512 Advanced Algorithms.
- Spring, 24: CS4412/5512 Advanced Algorithms.
- Fall, 23: CS1181 Computer Science and Programming.

PEER REVIEWED PUBLICATIONS

- [COMPSAC-SCA, 25] **Md Mosharaf Hossan**, Rifat Ara Tasnim, Farjana Z. Eishita (2025). **Can You Keep Calm?: Adaptive Gameplay using Heart Rate as a Controller**. Accepted for publication in *8th International Workshop on Smart Computing and Applications (SCA 2025)*, held in conjunction with *IEEE COMPSAC 2025*.
- [IETC, 25] **Md Mosharaf Hossan**, Rifat Ara Tasnim, Farjana Z. Eishita (2025). **Gamified Virtual Reality Exposure Therapy for Mysophobia: Evaluating the Efficacy of a Simulated Sneeze Intervention**. Accepted for publication in *In 2025 Intermountain Engineering, Technology and Computing (IETC)*. [\[Premium Paper Award\]](#)
- [IETC, 25] Aney Rani Paul, **Md Mosharaf Hossan**, Farjana Z. Eishita (2025). **Analyzing the User Experience of Google Drive Storage Management with Alert Notification**. Accepted for publication in *In 2025 Intermountain Engineering, Technology and Computing (IETC)*.
- [MSR, 25] Costain Nachuma, **Md Mosharaf Hossan**, Asif Kamal Turzo, Minhaz F. Zibran (2025). **Decoding Dependency Risks: A Quantitative Study of Vulnerabilities in the Maven Ecosystem**. Accepted for publication in *22nd international conference on mining software repositories (MSR)*.
- [IoTaIS, 24] **Md Mosharaf Hossan**, Mostafa M. Fouda, Farjana Z. Eishita (2024). **Adaptive Game Design Using Machine Learning Techniques: A Survey**. In *The 2024 IEEE International Conference on Internet of Things and Intelligence System (IoTaIS)*, pages 144-150, IEEE, 2024, Location. DOI: 10.1109/IoTaIS64014.2024.10799330.
- [IETC, 24] Rifat Ara Tasnim, **Md Mosharaf Hossan**, Farjana Z. Eishita (2024). **Analyzing Differential Impact of Text-Based Instructions in Video Games**. In *2024 Intermountain Engineering, Technology and Computing (IETC)*, pages 227-232, IEEE, 2024, Location. DOI: 10.1109/IETC61393.2024.10564249. [\[Best Paper Award\]](#)

PROFESSIONAL EXPERIENCE

Mid-Senior Software Engineer

May 2023 – July 2023

Nimble

Bangkok, Thailand

- Initiated development of a google scrapping tool based on rails template.
- Contributed to Nimble's optimized rails template.

Senior Software Engineer

January 2021 – April 2023

Sigma Solutions

Dhaka, Bangladesh

- Oversaw a team to automate Service Center workflows for a telecom provider serving over 56M users and enabled near real time fault detection on 16K nodes.
- Managed the creation of a bot-based telecom node monitoring solution that cut monthly client costs by \$30,000.
- Led WebDriver-based UI automation for Huawei and Ericsson telecom portals which resulted in 50% time savings.

- Designed and developed RESTful APIs for Smartcomm, a SaaS-based omnichannel customer query management system.

Software Engineer

March 2019 – December 2020

Sigma Solutions

Dhaka, Bangladesh

- Designed UI, integrated payment gateway, and developed RESTful APIs for Pixmama, a stock photo marketplace with over 80K photos.
- Reduced review time for image moderators by creating a duplicate photo detection system with Amazon Rekognition and Elasticsearch.
- Built a CRM-enabled operations platform for a construction firm that reduced manual effort by around 30% by improving field coordination.

Software Engineer

March 2019 – December 2020

Sigma Solutions

Dhaka, Bangladesh

- Developed RESTful backend APIs and frontend components for myRADAR, a real-time vehicle tracking system used by 2,000 daily active devices.
- Increased refuel detection accuracy in myRADAR by 20% through anomaly filtering and long-term fuel pattern analysis.

TECHNICAL SKILLS

Languages: Python, PHP, JavaScript, C/C++, C#, SQL, HTML/CSS, L^AT_EX

Frameworks: Laravel, PHPUnit, Vue.js, Angular, Nuxt.js, D3.js, Tailwind CSS, TensorFlow, PyTorch

DBMS: MySQL, PostgreSQL, MongoDB, Neo4j

Cloud: AWS(EC2, S3, Lambda, RDS)

Operating Systems: Linux, MacOS, Windows

Other Tools & Technologies:: Git, Docker, Docker Swarm, Unity, Redis, Elasticsearch, TDD, CI/CD, Shell Scripting

HONORS & AWARDS

- Dean's Excellence Fund Award for attending COMPSAC, 2025
- Premium paper award at IETC, 2025
- Best Paper Award at IETC, 2024

REVIEWING / COMMUNITY SERVICES

- COMPSAC 2025 Symposium on Mobile, Wearable & Ubiquitous Computing (MOWU)
- COMPSAC 2024 Symposium on Mobile, Wearable & Ubiquitous Computing (MOWU)
- 2024 IEEE Gaming, Entertainment, and Media Conference (GEM)
- 26th International Conference on Mobile Human-Computer Interaction (MobileHCI)

LEADERSHIP & VOLUNTEERING EXPERIENCE

- Treasurer, ISU Tennis Club — August 2023 – May 2025
- Vice President, Bit to Byte, Software Development Club — August 2016 – July 2017
- Volunteer, Bengal Bio Open House, Idaho State University (2025)
- Mentor, National High School Programming Contest (NHSPC) (2015, 2016, 2017).

REFERENCES

- **Dr. Farjana Z Eishita**
Assistant Professor, Department of Computer Science
Idaho State University
Email: farjanaeishita@isu.edu
- **Dr. Minhaz Zibran**
Associate Professor, Department of Computer Science
Idaho State University
Email: minhazzibran@isu.edu
- **Dr. Mostafa Fouda**
Associate Professor, Department of Computer Science
Idaho State University
Email: mfouda@isu.edu