

S M Hasan Mansur

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Fairfax, Virginia - 22031, USA

SUMMARY

Research Interests: Machine Learning and Deep Learning with applications in Software Engineering and HCI.

Publication track record in top-tier SWE venues. 5+ years of professional software engineering experience.

3 years of teaching assistantship experience. Open to relocation and no sponsorship required.

EDUCATION

• George Mason University

PhD candidate in Computer Science
◦ Dissertation: Automated Software Engineering via Learning from Graphical User Interfaces
◦ Advisor: [Dr. Kevin Moran](#)

August 2018 - Present

Virginia, USA

• George Mason University

MS in Computer Science
◦ CGPA: 3.83/4.00

May 2023

Virginia, USA

• Shah Jalal University of Science & Technology

BS in Computer Science
◦ CGPA: 3.54/4.00

April 2007

Sylhet, Bangladesh

RESEARCH & TEACHING EXPERIENCE

• George Mason University

Graduate Research Assistant
◦ Major areas of contribution: Software Documentation, Ethical Software Design, Software Accessibility.
◦ Lead the project *MultiC2C* that aims to benchmark the performance of state-of-the-art multimodal LLMs in generating context-aware summaries from code snippet, related UI screenshot and metadata.
◦ Designed and developed *AidUI*, a novel approach to detect and localize deceptive design patterns on UIs.
◦ Collaborated on curating dataset and developing semantic text matching prototype in project *MotorEase*, an approach to detect motor-impairment accessibility violations in app UIs.
◦ Collaborated in developing benchmark datasets for *Software Evolution*, *Bug Reporting* and *Bug Localization*.

May 2025 - Present | May 2021 - August 2024

Virginia, USA

• George Mason University

Graduate Teaching Assistant
◦ Courses: Python Programming, Database, Computer Vision, Formal Methods.
◦ Helped design programming assignments and evaluation rubrics.
◦ Prepared and conducted lab sessions, tutorials, and recitations.
◦ Graded assignments, quizzes, and exams with consistent and timely feedback.
◦ Managed course forums and provided one-on-one academic assistance to students through regular office hours.

August 2024 - May 2025 | August 2018 - May 2021

Virginia, USA

PROFESSIONAL EXPERIENCE

• Ice9 Ltd.

Software Engineer
◦ Core engineering team member for developing and maintaining *SMASHBOARD.CO*, a CRM & analytics platform.
◦ Collaborated on strategic planning for architecture design, development, testing and deployment.
◦ Optimized database and implemented master-replica architecture to resolve scalability and synchronization issues.
◦ Lead the migration of the core product from Rackspace to AWS.

April 2017 - July 2018

Dhaka, Bangladesh

• Synchronous ICT

Software Engineer
◦ Developed user management, search and notification platforms of *COMX*, an in-house application framework.
◦ Assessed team's capacity to deliver, formed sprints and released duration based development milestones.
◦ Established software engineering practices like version controlling, issue tracking and test driven development.

February 2015 - April 2017

Dhaka, Bangladesh

• Dcastalia

Software Engineer
◦ Developed *HE BUSINESS MANAGER*, an Android application for inventory management of healthcare products.

August 2013 - January 2015

Dhaka, Bangladesh

• Mercedes-Benz Group AG (former Daimler AG)

Student Intern
◦ Developed *Key-Value* pair parser to convert the unstructured environment perception data into a canonical form.

October 2012 - July 2013

Ulm, Germany

• Grameenphone Ltd.

System Engineer
◦ Member of the transmission network configuration and optimization team to serve over 20 million mobile users.

July 2007 - February 2011

Dhaka, Bangladesh

PUBLICATIONS

- [1] [MOBILESoft'25] Zihe Song, **S M Hasan Mansur**, Ravishka Rathnasuriya, Yumna Fatima, Wei Yang, Kevin Moran, Wing Lam, "*Can You Mimic Me? Exploring the Use of Android Record & Replay Tools in Debugging*", in Proceedings of the 2025 IEEE/ACM 12th International Conference on Mobile Software Engineering and Systems, Ottawa, Canada, April 2025.
- [2] [ICSE'24] Arun Krishnavajjala, **S M Hasan Mansur**, Justin Jose, Kevin Moran, "*MotorEase: Automated Detection of Motor Impairment Accessibility Issues in Mobile App UIs*", in Proceedings of the IEEE/ACM 46th International Conference on Software Engineering, Lisbon, Portugal, April 2024.
- [3] [ICSE'24] Junayed Mahmud, Nadeeshan De Silva, Safwat Ali Khan, Seyed Hooman Mostafavi, **S M Hasan Mansur**, Oscar Chaparro, Andrian (Andi) Marcus, Kevin Moran, "*On Using GUI Interaction Data to Improve Text Retrieval-based Bug Localization*", in Proceedings of the IEEE/ACM 46th International Conference on Software Engineering, Lisbon, Portugal, April 2024.
- [4] [MSR'24] Sabiha Salma, **S M Hasan Mansur**, Kevin Moran, Yule Zhang, "*GUIEvo: Automated Evolution of Mobile Application GUIs from Mockups*", in Proceedings of the 21st International Conference on Mining Software Repositories, Lisbon, Portugal, April 2024.
- [5] [ICSE'23] **S M Hasan Mansur**, Kevin Moran, "*Toward Automated Tools to Support Ethical GUI Design*", in Proceedings of the 2023 IEEE/ACM 45th International Conference on Software Engineering, Doctoral Symposium Track, Melbourne, Australia, May 2023.
- [6] [ICSE'23] **S M Hasan Mansur**, Sabiha Salma, Damilola Awofisayo, Kevin Moran, "*AidUI: Toward Automated Recognition of Dark Patterns in User Interfaces*", in Proceedings of the 2023 IEEE/ACM 45th International Conference on Software Engineering, Research Track, Melbourne, Australia, May 2023.
- [7] [MSR'21] Tyler Wendland, Jingyang Sun, Junayed Mahmud, **S M Hasan Mansur**, Steven Huang, Kevin Moran, Julia Rubin, Mattia Fazzini, "*AndroR2: A Dataset of Manually-Reproduced Bug Reports for Android apps*", in Proceedings of the 2021 IEEE/ACM 18th International Conference on Mining Software Repositories, Madrid, Spain, May 2021.

SELECTED RESEARCH

- **Multimodal Code Summarization** Ongoing
Principal Contributor
 - Goal: To investigate on Multimodal-LLMs capabilities in capturing UI semantics for code summarization.
 - Automated a pipeline to collect and map multi-modal data (code, comments, UI) from open-source repositories.
 - Lead the team to develop ground truth code summaries by augmenting UI information.
 - Formulated the design of experiments that include different prompt techniques, input modalities and LLMs.
 - Developed the pipeline for both lexical and semantic similarity based quantitative evaluation.
 - Conducted user study to assess human evaluation of generated code summaries.
- **AidUI** ICSE'23
Principal Contributor [Paper][Code]
 - AidUI is an automated approach to detect and localize deceptive design patterns on UIs.
 - Developed a unified taxonomy and heuristic rules to detect visual-textual cues of deceptive UI patterns.
 - Automated a data pipeline to extract UIs from public app usage videos and screenshots from prior studies.
 - Designed and developed a computer vision and NLP-based novel approach to detect deceptive UI patterns.
 - Implemented an automated evaluation pipeline. Dockerized and published research artifacts in a public repository.
- **MotorEase** ICSE'24
Collaboration [Paper][Code]
 - MotorEase is an approach to detect motor-impairment accessibility violations in app UIs.
 - Collaborated with the lead contributor on labeling and curation of the dataset.
 - Developed the initial prototype of the “Semantic Text Matching” component of the automated approach.
 - Conducted baseline experiments to assess performance in touch target and icon distance detection.

TECHNICAL SKILLS

- **Programming Languages:** Python, Javascript, Java, C, PHP, HTML, Shell Scripting
- **ML/DL/NLP:** LLM (prompting, finetuning), PyTorch, Hugging Face, LangChain, scikit-learn, spaCy
- **Databases:** MySQL, MongoDB, Redis, Elasticsearch, SQLite
- **Libraries:** OpenCV, NumPy, Matplotlib, Pandas, Socket.IO
- **Backend/Cloud/DevOps:** Node.js, Express.js, REST API, AWS, Docker, Git

TEACHING TRAININGS

- **George Mason University** Ongoing
Virginia, USA
Graduate Teaching Academy – SkillCraft
 - Title: SkillCraft Level 1 - Essentials of Student Engagement
 - Sessions: Fundamentals of Student Engagement | In Class Activities | Grading and Feedback | Classroom Climate

- **George Mason University** 2024
Virginia, USA
Stearns Center for Teaching and Learning
 - Title: Inclusive Teaching for STEM Graduate Students Mini-Course
 - Sessions: Developing inclusive classroom spaces | Preparing the course | Handling classroom situations

STUDENT MENTORSHIP

- **George Mason University** 2021 - 2022
Virginia, USA
Aspiring Scientists Summer Internship Program
 - High School Mentees: Damilola Awofisayo, Justin Jose

RESEARCH TALKS

- **George Mason University** April 2024
Virginia, USA
Dissertation Proposal Presentation
 - Automating Software Engineering via Learning from Graphical User Interfaces

- **JPMorgan Chase & Co.** January 2024
Virtual
Interview - 2024 AI Research Summer Associate Program
 - Multi-modal Learning for Software Engineering Automation

- **Los Alamos National Laboratory** January 2024
Virtual
Interview - AML Summer Internship
 - Multi-modal Learning for Software Engineering Automation

- **International Conference on Software Engineering** May 2023
Melbourne, Australia
Research Track
 - AidUI: Toward Automated Recognition of Dark Patterns in User Interfaces

- **International Conference on Software Engineering** May 2023
Melbourne, Australia
Doctoral Symposium
 - Toward Automated Tools to Support Ethical GUI Design

HONORS & AWARDS

- **NSF Travel Award**, International Conference on Software Engineering 2023
- **Best Poster Presentation Award**, GMU CS Research Symposium 2022
- **Summer Research Initiation Award**, Dept. of Computer Science, GMU 2019

PROFESSIONAL SERVICES

- **Junior PC Member**, MSR'24 2024
- **Co-Reviewer**, MSR'22 2022
- **External Reviewer**, ICPC'21, ICSE'21, MSR'21, ASE'22, SANER'22, SANER'23, ICSE'23 2021 - 2023

LEADERSHIP & VOLUNTEER EXPERIENCE

- **Director-Web Services**, Bangladeshi Graduate Student Association, GMU 2021 - 2022
- **Member**, KIN (*Humanitarian Organization*), SUST, Bangladesh 2002 - 2007

REFERENCES

1. Dr. Kevin Moran

Assistant Professor, Department of Computer Science
University of Central Florida
Email: kpmoran@ucf.edu
Phone: (407)-823-3219

2. Dr. Andrian Marcus

Professor, Department of Computer Science
George Mason University
Email: amarcus7@gmu.edu
Phone: (703)-993-9237

3. Dr. Ahmed Bin Zaman

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George Mason University
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Phone: (703)-993-6642

4. Dr. Mattia Fazzini

Assistant Professor, Department of Computer Science & Engineering
University of Minnesota
Email: mfazzini@umn.edu
Phone: (612)-625-4365