S M Hasan Mansur

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EDUCATION

George Mason University
Ph.D. in Computer Science
Advisor: Kevin Moran
Aug 2018 - Dec 2024 (expected)

George Mason University
M.S. in Computer Science
CGPA: 3.73 | May 2023

Shah Jalal University of Science & Technology, Bangladesh
B.S. in Computer Science
CGPA: 3.54 | Apr 2007

AWARDS

NSF Travel Award
ICSE'23 | *April 2023*

Best Poster Presentation Award
GMU CS | *May 2022*

Summer Research Initiation Award
GMU CS | *May 2019*

PROFESSIONAL SERVICES

Co-Reviewer | MSR'22

External Reviewer |
ICSE'23, SANER'23, ASE'22, SANER'22, ICPC'21, ICSE'21, MSR'21

VOLUNTEERING

ASSIP, GMU
High School & Undergrad Internship
Co-Mentor | *May 22 - Aug 22*

BDGSA, GMU
Student Organization
Director, Web Services | *2021-22*

KIN, SUST, Bangladesh
Humanitarian Organization
Member | *2002-07*

TECHNICAL SKILLS

- Python, Javascript, Java, C
- PyTorch, OpenCV, spaCy
- Node.js, Express.js, REST API
- MySQL, MongoDB, Redis, Elasticsearch
- Git, Docker, AWS
- Microservices, TDD

REFERENCES

Dr. Kevin Moran
Assistant Professor | CS | UCF
Email: kpmoran@ucf.edu

Dr. Wing Lam
Assistant Professor | CS | GMU
Email: winglam@gmu.edu

RESEARCH INTERESTS

Software Engineering, HCI, Machine Learning

EXPERIENCE

George Mason University | *Graduate Research Assistant* *May 2021 - Present*
- Working on research projects focused on developing automated approaches to help facilitate Ethical Software Design, Software Evolution, and Software Accessibility

George Mason University | *Graduate Teaching Assistant* *Aug 2018 - May 2021*
- Assisted in mentoring undergrad students, grading assignments, and proctoring exams
- Courses: Introduction to Computer Programming, Database Systems, Computer Vision

Ice9 Ltd., Bangladesh | *Software Engineer* *Apr 2017 - Jul 2018*
- Worked on the engineering and infrastructure team responsible for developing social media query and analytics platforms of project *'smashboard.co'*
- Implemented master-replica architecture to resolve the synchronization delay of real time queries from social platforms

Synchronous ICT, Bangladesh | *Software Engineer* *Feb 2015 - Apr 2017*
- Lead the backend engineering team responsible for developing user management and search platforms of project *'ComX'*

Dcastalia, Bangladesh | *Software Engineer* *Aug 2013 - Jan 2015*
- Developed and published native Android application *'HE Business Manager'*
- Collaborated with the server-side team to design the database & the APIs

Daimler AG, Germany | *Student Intern* *Oct 2012 - Jul 2013*
- Developed a key-value pair parser for environment perception data

Grameenphone Ltd, Bangladesh | *System Engineer* *Jul 2007 - Feb 2011*
- Member of the transmission optimization team to serve over 20 million users

PUBLICATIONS

- Arun Krishnavajjala, **S M Hasan Mansur**, Justin Jose, Kevin Moran, *"MotorEase: Automated Detection of Motor Impairment Accessibility Issues in Mobile App UIs"* (under review)
- 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"*, ICSE'24, to appear
- **S M Hasan Mansur**, Kevin Moran, *"Toward Automated Tools to Support Ethical GUI Design"*, ICSE'23: Companion Proceedings, https://ieeexplore.ieee.org/abstract/document/10172491
- **S M Hasan Mansur**, Sabiha Salma, Damilola Awofisayo, Kevin Moran, *"AidUI: Toward Automated Recognition of Dark Patterns in User Interfaces"*, ICSE'23, https://arxiv.org/abs/2303.06782
- 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"*, MSR'21, https://arxiv.org/abs/2106.08403

SELECTED RESEARCH PROJECTS

AidUI | Principal Contributor | *SAGE lab, GMU* *May 2021 - Present*
- A novel automated approach to detect deceptive UI designs, aka *Dark Patterns*
- Proposed & developed the approach as a four-step process (*Visual Cue Detection, Text Detection, Dark Pattern Analysis & Resolution*) by leveraging Computer Vision and NLP techniques
- Developed the dataset *ContextDP* that includes Dark Pattern instances localized to UI screenshots
- Open-sourced the project artifacts and bundled the approach as a publicly available Docker image

MotorEase | Co-Contributor | *SAGE lab, GMU* *May 2022 - Present*
- A novel automated approach to detect motor-impairment accessibility violations in apps
- Prototyped the initial version of the text detection module to aid in *UI Closure Control Detection*

OPEN-SOURCE PROJECTS

- **Drishtipat** : implementation of different Computer Vision concepts *Feb-June 2020*
- **Ontorjal** : implementation of DNS client and Distance Vector Routing protocol *May-Aug 2020*
- **Tasky** : Node.js based REST API boilerplate for a simple task manager *May-Jul 2016*