

# SABIHA SALMA

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## INTERESTS

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UX/UI Research, Software Engineering, HCI, ML/AI for Software Engineering

## EDUCATION

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**Ph.D in Computer Science**, George Mason University 2018 - Present

**Master of Computer Science**, George Mason University 2018 - Present

Relevant Courses: Introductory Research: Developers Experience with Programming Tools, Intersections of DL/SE

**Bachelor of Computer Science**, University of Dhaka, Bangladesh 2010 - 2014

## EXPERIENCE

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**Project Lead, Graduate Research Assistant, Graduate Teaching Assistant** May 2021 - Present  
Sage Lab, George Mason University *Fairfax, VA*

- Designed and developed an automated tool using advanced Computer Vision techniques to assist developers during the evolution of Android apps by addressing the challenge of automatic GUI change identification and updated GUI metadata generation in successive releases of Android apps. Achieved over 85% accuracy.  
**Achievement: Publication in MSR'2024 (Project lead)**

- Planned and organized a user study for understanding debugging strategies and challenges for Android mobile apps to offer valuable insights into the needs of software developers that can guide the development of improved debugging tools in the future.  
**Achievement: NSF-funded ongoing study (Project lead)**

- Contributed in developing *ContextDP* dataset with instances of deceptive patterns localized to UI screenshots.  
**Achievement: Publication in ICSE'2023 (Co-contributor)**

- Contributed in designing a behavioral oracle taxonomy for Android apps to identify and categorize common GUI element behaviors.  
**Achievement: Publication in MSR'2024 (Co-contributor)**

- Designed and developed a real-time chat application. Demonstrated different learned concepts of prototype development, heuristic evolution, interaction design iteration, usability evolution and visual design iteration.  
**Achievement: Best Project Demonstration (Co-contributor)**

- Led a team of five graduate teaching assistants. Developed scripts & junit tests for grading student projects  
**Achievement: Awarded as Distinguished (2020) and Outstanding (2021) GTA**

**Project Lead** 2015-2016  
University of Dhaka *Bangladesh*

- Showcased my innovation in a nation-wide student competition for idea generation organized by the Government of Bangladesh. Designed a student engagement monitoring system through a video-based learning platform.

**Outcome: Awarded with ICT Fellowship equivalent of NSF Graduate Research Fellowship**

## SERVICES

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**External Reviewer, Co-Reviewer, Junior PC** May 2021 - Present

- ER: [ICSE23, SANER23, ASE22, SANER22, ICPC21, & MSR21], CR:[MSR22], Junior PC: [MSR'24]

## SKILLS

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**Languages** Python, Java, HTML5, CSS3, SQL

**Tools & Frameworks** OpenCV, TensorFlow, Scikit-learn, Pandas, Numpy, Android Studio, Git