




# Md Rayhanur Rahman

Doctoral Student

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## Education

Ph.D. | Computer Science | North Carolina State University | 2018-Present (Expected graduation: Dec'23) | 3.83/4.0

Masters | Software Engineering | University of Dhaka | 2013-2014 | 3.98/4.00

Bachelor | Software Engineering | University of Dhaka | 2009-2012 | 3.96/4.00

## Skills

Languages: C#, Java, Python, MSSQL, R  
WebDev : HTML, CSS, JS, JQuery, knockoutjs, Nodejs, ASP.NET MVC, CodeQL, KQL  
Research related: Machine learning, Natural language processing, Graph Machine Learning  
Cybersecurity: MITRE ATT&CK  
Other: Linux, Latex, Git

## Extra-Curricular

Champion, GetRoot Byteknigh Cyber Security Challenge Competition - OWASP Bangladesh, 2012 | Finalist - .NET Track, BASIS Code Warriors Challenge, 2012 | Finalist, Microsoft Imagine Cup Bangladesh Software Competition, 2012

## Awards

Innovation Fund, Ministry of ICT, Government of Bangladesh, 2014-15 for State of the Art Mobile App Testing Framework in the Cloud | National Science and Technology (NST) Fellowship, Ministry of Science and Technology, Government of Bangladesh, 2013-14

## Work Experience and Internships

- Aug'18 - Research Assistant NC State University  
I am working as a RA under Dr. Laurie Williams. My research focuses on understanding attack patterns of multi-stage cyberattacks towards formulating detection and mitigation strategies
- Summer'21 Instructor NC State University  
Took C and Software Tools undergraduate course
- Summer'20 Research Intern Microsoft  
I have worked with 1ES team to analyze and investigate how the security tools can be improved through the usage data analysis and developer survey
- Sep'14 Lecturer University of Dhaka  
I took various courses in undergraduate program such as Discrete Math, Object Oriented Programming etc

## Research Publications

- In-progress An investigation of security controls and MITRE ATT&CK techniques
- In-progress Investigating co-occurrences of MITRE ATT&CK Techniques
- Oct'22 What are the attackers doing now? Automating cyberthreat intelligence extraction from text on pace with the changing threat landscape: A survey ACM Computing Survey
- Mar'22 Why secret detection tools are not enough: An industrial case study Empirical Software Engineering Journal
- May'19 Share but beware: Security Smell in Python Gists ICSME'19

## Projects

- Current Mining attack path from cyberthreat intelligence reports and prioritizing security controls based on the patterns
- Aug'20 Identifying software security activities in Github repositories using NLP
- Dec'19 One Page Resume Website Builder Bot for Slack
- Dec'18 Spark RDD to Dataframe API converter
- Dec'18 Scalable VFDT Implementation for Software Defect Prediction
- Jan'15 Click2Dial Microsoft Outlook Extension

## Contribution

- Oct'20 - Serving as a mentor in Erevna Research Fellowship
- 2019 - Served as internal/sub reviewer for ICSE'21, ICSE'20, MSR'20, ESEM'20