

Avisha Das

PH.D. STUDENT · TEACHING ASSISTANT

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Education

University of Houston

Houston, Texas, U.S.

PURSuing PH.D. IN COMPUTER SCIENCE

Aug. 2014 - PRESENT

- Recipient of Graduate Tuition Fellowship (2014-PRESENT)
- CGPA: 3.6/4.0

West Bengal University of Technology

West Bengal, India

B.TECH. IN ELECTRONICS AND COMMUNICATION ENGINEERING

Aug. 2010 - May 2014

- Ranked in the Top 6%
- CGPA: 9.18/10.0

Research

Teaching Assistant

University of Houston

UNDERGRADUATE DATA STRUCTURES AND ALGORITHMS

Aug. 2016 - PRESENT

- Grading copies and occasional instructor

Graduate Research Assistant

*Dept. of Computer Science,
University of Houston*

REASONING AND DATA ANALYTICS IN SECURITY (ReDAS) LAB

Jan. 2015 - Aug. 2016

- **Link Analysis using Machine Learning Algorithms:** Detection and extraction of URLs from emails and datasets using Online Learning Algorithms. I used NLP techniques to build automatic feature extractors for URLs extracted by web and email inbox crawlers. The OL algorithms are used to classify the URLs based on the feature extractors.
- **Machine Assisted Semantic Understanding of Source Code:** An automated code assistance and query answering system developed using machine learning (Rank-SVM) and NLP based (TF-IDF, Topic modelling) techniques and trained on GitHub data

System and Web-server Administrator

*Dept. of Computer Science,
University of Houston*

REASONING AND DATA ANALYTICS IN SECURITY (ReDAS) LAB

Jan. 2010 - PRESENT

- Maintained an Ubuntu System Server
- Developed and maintained NSF Funded Websites: capex.cs.uh.edu, ciare.cs.uh.edu, spsl.cs.uh.edu, sfs.cs.uh.edu
- Administered SVN server
- Assisted with the organization of IWSPA('16,'17) co-located with ACM-CODASPY('16,'17)

Relevant Courses and Projects

- Natural Language Processing: *Code Switching and Language Identification in Twitter Data; Language modeling with Neural Networks and Deep Learning*
- Data Mining: *Fake Review and Opinion Spamming; Implementation of Apriori Algorithm for Pattern Mining (Python)*
- Machine Learning: *Implementation of Neural Networks (Python)*
- Advanced Operating Systems: *Building a basic Unix Terminal for handling background processes, I/O redirection and piping as well as built-in commands like cd, help, exit and jobs (C++)*
- Security Analytics: *Sentiment Analysis of Hotel Reviews using NLP (Python)*
- Automata and Information Theory

Honors & Awards

UNIVERSITY OF HOUSTON

- Doctoral Student Fellowship (2014-2016)

WEST BENGAL UNIVERSITY OF TECHNOLOGY

- Undergraduate Scholarship for University Students (2010-2014)
– Human Resource Development Ministry of India
- Ranked 6th out of a total of 147 students in department.

TRAVEL GRANTS AND SCHOLARSHIPS

- Travel Grant for authors - International Workshop on Security and Privacy Analytics (IWSPA) 2017
- Scholarship for attendance - Women in Cyber Security (WiCyS) 2016, 2017
- Scholarship for travel and attendance - Computing Research Association's Grad Cohort Workshop for Women (CRA-W) 2016

Technical Skills

LANGUAGES:

- Python, C/C++, R, Ruby, Java, HTML, CSS, Shell scripting (Linux, Windows-Powershell)

SOFTWARE:

- MATLAB, WEKA, L^AT_EX, Standard NLP and Machine Learning tools and packages (NLTK, SciPy, NumPy, etc.), Java Eclipse IDE, Web Development using Drupal

OPERATING SYSTEMS:

- Windows, Linux/Unix

Publications

RESEARCH PAPER

- **What's In an Address: Fast Feature Extraction and Detection of Malicious URLs**
Avisha Das and Rakesh Verma
International Workshop on Privacy and Security Analytics 2017, ACM CODASPY'17

POSTERS

- **A Study of Randomness in Phishing URLs**
Avisha Das and Rakesh Verma
Women in Cyber Security (WiCyS) 2017
- **Detection and classification of Phishing URLs**
Avisha Das and Rakesh Verma
Grace Hopper Conference for Celebration of Women (GHC) 2016
- **Are Legit and Phishing URLs similar? Lexical Analysis of URLs**
Avisha Das and Rakesh Verma
Women in Cyber Security (WiCyS) 2016

Extra-Curricular Activities

- 2016 **External Reviewer**, International Workshop on Security and Privacy Analytics
- 2017 **Member**, C.S. Cyber Security Club, University of Houston