EDUCATION

PAL

BIJEETA

PhD in Computer Science | Cornell University

SPECIALIZATION – APPLIED CRYPTOGRAPHY, COMPUTER SECURITY, DEEP LEARNING

- Developed a targeted password attack using deep learning model that beats the state-of-the-art result.
- Current password strength meters are incapable of preventing targeted attacks. Developed a new password strength meter that detects 90% of passwords susceptible to these attacks.
- Formalized security requirements of leaked password checking services, showed that current services are vulnerable to attacks and proposed two new protocols give better security guarantee and remain practical to deploy.
- Designed a second generation credential checking services, Might I Get Pwned (MIGP), that warns users from selecting passwords similar to breached ones.

Master's in Computer Science | Purdue University

GPA - 3.9, RESEARCH ASSISTANT UNDER PROF. MIKHAIL ATTALAH

Worked on a startup based on information security and cryptography.

Bachelor's in Computer Science | Indian Institute of Technology, BHU GPA - 9.1, RANK- 2/82

Developed better optimization algorithms for orienteering problem.

Worked on parameterized complexity for sorting algorithms

EXPERIENCE

ML Associate Intern | JP Morgan, NYC.

Worked with FX E-Trading team to build a system that determines the optimal skew aggressiveness given a market condition using reinforcement-based learning.

Research Intern | Microsoft Research, Redmond.

Worked with Cryptography Team to understand the extend of memorization and leakage attacks in Smart Reply application.

Research Intern | Microsoft Research, Cambridge.

Worked with Confidential Computing Team to understand the impact of transfer learning techniques, used in deep learning training, from security and privacy perspective.

SDE Intern | Amazon.

- Worked on two project in my internship, one involving making the survey question more personalized by using NLP and other project to rank question based which is most relevant question to ask employee using Machine Learning.
- Won Global Intern Hackathon

1 E Loop Rd, #10J, New York, NY - 10044

765-775-3041 5

bp397@cornell.edu https://www.linkedin.com/in/bijeetapal/

https://www.cs.cornell.edu/~bijeeta/



June 2020– Aug 2020

May 2016 – July 2016

June 2019 – Aug 2019

June 2021– Aug 2021

\sim in

July 2015 – May 2017

July 2010 – May 2014

Programmer Analyst | Goldman Sachs.

Fall 2019

Fall 2017

Responsible for ensuring compliance and implemented efficient algorithms to detect spurious data patterns.

PUBLICATIONS

- Bijeeta Pal, Mazharul Islam, Rahul Chatterjee, Thomas Ristenpart (2021), Might I Get Pwned: A Second Generation Password Breach Alerting System (Submitted)
- Sophie Stephenson, Bijeeta Pal, Yuhang Zhao, Earlence Fernandes, Rahul Chatterjee (2021), Sok: Authentication in Augmented and Virtual Reality, IEEE Symposium on Security and Privacy (In Revision)
- Bijeeta Pal, Esha Ghosh, Melissa Chase (2021), Entity Level Membership Attacks in Smart Reply (In progress)
- Bijeeta Pal, Shruti Tople (2020), To Transfer or Not to Transfer: Misclassification Attacks Against Transfer Learned Text Classifiers, arXiv preprint, arXiv:2001.02438, 2020
- Lucy Li, Bijeeta Pal, Junade Ali, Nick Sullivan, Rahul Chatterjee, Thomas Ristenpart (2019), Protocols for Checking Compromised Credentials, ACM CCS
- Bijeeta Pal, Tal Daniel, Rahul Chatterjee, and Tom Ristenpart (2019), Beyond Credential Stuffing: Password Similarity Models using Neural Networks, IEEE Symposium on Security and Privacy
- Madhushi Verma, Mukul Gupta, Bijeeta Pal, K. K. Shukla (2014), Roulette Wheel Selection based Heuristic Algorithm for the Orienteering Problem, International Journal of Computers & Technology, vol. 13 (1), pp. 4127-4145, ISSN: 2277-3061
- Madhushi Verma, Bijeeta Pal, Mukul Gupta and K. K. Shukla (2014), A Stochastic Greedy Heuristic Algorithm for the Orienteering, 5th International Conference on Computer and Communication Technology
- K.K.Sundararajan, Mita Pal, Soubhik Chakraborty, Bijeeta Pal and N.C.Mahanti (2011). An Empirical Study on K-Sort for Binomial Inputs, International Journal of Mathematical archive-2(8), Page 1274-1278
- K.K.Sundararajan, Mita Pal, Soubhik Chakraborty, Bijeeta Pal and N.C.Mahanti (2012). K Sort Revisited for Negative Binomial Inputs, American Journal of Algorithms Research;1(1):Page 1-4

TEACHING

CS Teaching Assistant | Cornell University.

CS 5435 – Security and Privacy in the Wild.

CS Teaching Assistant | Cornell University.

CS 5435 – Security and Privacy in the Wild.

AWARDS

Awarded JP Morgan Fellowship 2021-22

SKILLS

Languages: Python, Java, C++/C, SQL, HTML/CSS, JavaScript, AngularJS Technologies: MVC, Rest Services, TCP/IP, Full-stack development

ACTIVITES

- Learned Salsa Dance for 1 year in Purdue University.
- Learnt Indian classical dance, KATHAK, for more than 10 years. Completed graduation in Kathak