

# Nagendra Posani

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## Education

**Georgia Institute of Technology**

*MS in Information Security*

**Expecting Dec'2017**

*GPA: 3.75*

**Dhirubhai Ambani Institute of ICT**

*Bachelor of Technology in ICT*

**2011–2015**

*GPA: 9.19/10*

## Publications

- o *Automatic Generation of Compact Alphanumeric Shellcodes for x86*, ICISS 2014, LNCS 8880, pp. 399 - 410.
- o *Alphanumeric Shellcode Generator for ARM Architecture* SPACE 2013, LNCS 8204, pp. 38 - 39.

## Experience

**Kuliza Technologies Pvt. Ltd.**

*iOS Developer,*

**Bangalore, IN**

*Jan'15–July'16*

I developed 12 iOS applications for iPhone and Apple Watch, developed in Objective-C & Swift-2. My responsibilities include writing clean modular code, researching and implementing iOS development patterns and paradigms to increase efficiency and reduce app's resources.

**Research Intern at Indian Institute of Science**

*Summer Research Fellow, Guide: Padmashree Prof. N. Balakrishnan*

**Bangalore, IN**

*May'14–July'14*

Study of web-services security analysis of penetration testing tools. Simulations of attacks and understanding the counter measures, developed a new framework with ontology based detection and validation to counter attacks of web service security. .

## Technical Projects

**Eliminating Uninitialized-Use Vulnerabilities in System Software**

*Guide: Prof. Taesoo Kim*

**Team of 2**

*Jan'17–Present*

We are implementing a GCC plug-in to eliminate vulnerabilities related to uninitialized use of memory locations in GCC complied languages.

**Distributed Web Crawler Using Hadoop**

*Guide: Prof. Ling Liu*

**Team of 3**

*Feb'17–Present*

We designed and implementing a distributed web crawler using Hadoop, by controlling the mappers and integrating at reducers for deduplication.

**Secure Shared Store**

*Guide: Prof. Mustaque Ahamad*

**Team of 2**

*Aug'16–Dec'16*

We designed and implemented a secure distributed cloud storage with authentication, authorization and delegation functionalities in Java.

**Malicious Data Discovery for Alexa Top 1M Sites**

*Guide: Prof. Manos Antonakakis*

**Team of 6**

*Aug'16–Dec'16*

We crawl the Alexa top 1M websites for 3 weeks and analyse the data for malicious data or activities using JS static analysis and HTML DOM structure.

**Multicasting in Delay Tolerant Networks**

*Guide: Prof. Mostafa Ammar*

**Team of 5**

*Aug'16–Dec'16*

We implemented multicasting in Delay Tolerant Networks (DTN) in ONE simulator, which is a class of emerging networks which experience frequent and long duration partitions. Improved performance of the message delivery by 60% using PProPHET.

**Database Security: Survey on Searchable Encryption**

*Guide: Prof. Sasha Boldyreva*

**Team of 2**

*Aug'16–Dec'16*

We did a survey on Database Security namely Searchable Encryptions like Order Preserving, Order Revealing and Partial Order Preserving Encryptions. Analysed their current standards, attacks and there safety measures.

**Hardened Password System**

*Guide: Prof. Mustaque Ahamad*

**Team of 2**

*Aug'16–Dec'16*

We increased the entropy of attack work factor of regular password based authentication system by including the keystroke dynamics without storing the password on the system. We increased the entropy of the password authentication system by length of password.

## Skills

**Programming:** Python, Swift, Go, Javascript, JAVA, C, Objective-C, MySQL, HTML, CSS

**Tools:** XCode, SQLite, Fabric, Linux, LabView, Wireshark

**Relevant Course Work:** Network Security, Adv. Internet Computing, Data & Visual Analytics, Computer Networks, Applied Cryptography, Intro. Information Security, Secure Computer Systems.

## Achievements

- o *University Best Student Award - Gold Medal* from TCS for the academic year 2014-15 for overall academic excellency in engineering.
- o *Fellow of Summer Research Fellowship-2014* of Indian Academy of Sciences.
- o *IET-India Scholarship Award*, West Zone Winner 2013. (Awarded to top 5 students across India)

## Leadership Activities

- o Teaching Assistance for Data Structures and Database Systems course at DA-IICT (Fall-2014) & GaTech (Fall-2016).
- o Convener of Academic Committee of Student Body Government-(April, 14 - Dec., 14)