

EMPLOYMENT

- Research Assistant** **Johns Hopkins University, Baltimore, MD** **June 2018 – Present**
- Developed HIPAA compliant C++ Open Source PACS application for transfer of very large sized DICOM images over secure channel between several hospitals, making Johns Hopkins have its own PACS system serving other hospitals.
 - Developing an automated deployment and packaging system of the product, using Docker.
- Cybersecurity Intern** **SocialToaster Inc, Baltimore, MD** **May 2018 – August 2018**
- Performed audit and Penetration Testing on Rackspace Cloud based web application for finding vulnerabilities.
 - Introducing the developers with the security practices and developed OWASP Security Knowledge Framework.
 - Automated numerous security audit practices saving organization's monthly expenditure on security related activities earlier being outsourced and provided mitigation techniques for other identified vulnerabilities.
- Teaching Assistant, Databases** **Johns Hopkins University, Baltimore, MD** **Aug 2017 – Dec 2017**
- Assisted Prof David Yarowsky in preparing questions and solutions for assignments. Helping students understand various concepts of Databases and organized help sessions over integration of web application with databases.
- Security Consultant** **Deloitte, Bangalore, India** **Dec 2014 – Aug 2017**
- Finding OWASP list focused vulnerabilities and penetration testing of web applications.
 - Lead a team to deliver end-to-end functionality of Identity and Access Management project on SailpointIIQ.
 - Java/XML/JavaScript based development of a secure environment for Authentication, Authorization, On-boarding, Off-Boarding, Certifications, Report Generations, QuickLinks, Workflows, Policies, Custom Objects and Tasks.
 - Development of workflows for securely provisioning groups, permissions and access capabilities of users.
 - Powershell Script Automation for reconciliation of Roles and Entitlements.
- Software Developer (e-Commerce)** **Sapient, Bangalore, India** **Nov 2012 – Oct 2014**
- Developed modules of order placement, return, refund, exchange, and new store rollout process placed on website of a Textbook selling organization on Struts(J2EE) based Framework.
 - Development of SQL Scripts for optimization of heavy data feed jobs capable of handling over **8 million USD** worth of book related data in a day. Report generation according to client's requirements.

EDUCATION

- Johns Hopkins University – MS, Information Security** **Aug 2017 – Dec 2018**
- Graduate Coursework: Ethical Hacking, Modern Cryptography, Software Vulnerability Analysis, Cloud Computing Security, and Computer Intrusion Detection, Practical Cryptography, Security and Privacy in Computing.
- Birla Institute of Technology, Mesra – BE, Electrical and Electronics** **Oct 2008 – June 2012**
- Undergraduate Coursework: Unix and C Programming, Data Structures, Relational Databases, Information Technology, Scientific Computing, and Principles of Management.

ACADEMIC PROJECTS

- **Commercial Drone Hacking:** Identified vulnerabilities to make a flying drone crash. [Video](#) [Video](#)
- **AWS Security**
- **Intrusion Detection System using Machine Learning:** IDS working on k-NN algorithm.
- **Covert Channels:** Identified presence of covert channels in co-existing virtual machines. [GitHub](#)
- **Access Control Lists :** Whitelisting and Blacklisting.
- **Format String Vulnerabilities:** Exploit for FSV using buffer overflow.
- **Firewall Configuration to Prevent Undesirable Intrusion:** Python based iptables configuration.
- **MapReduce using Zero Knowledge Concepts:** Hadoop based implementation for data security. [GitHub](#)
- **Detecting Malicious Activities:** Identified malicious packets on network using tcpdump.

ACHIEVEMENTS

- Acknowledged as a Star Performer at Sapient.
- Awarded for Client Appreciation Award at Deloitte.
- Winner of Java and C coding at Birla Institute of Technology, Mesra.

LANGUAGES AND TECHNOLOGIES

Programming Languages: Java, Python, C, GoLang, Powershell, Amazon Web Services, Rest and SOAP, HTML, CSS, Javascript, MySQL, Oracle DB, MSSQL.

Security Tools: BurpSuite, DirBuster, HexorBase, SQLMap, Metasploit, Nessus, IDA Pro, tcpdump, Reverse Engineering, Source code Analysis, Penetration Testing, iptables, IDS, IPS, Threat Modelling

