
Personal Statement

I am highly intrigued and passionately believe in acquiring knowledge in the spheres of Security and Cryptography, especially with their usage in relation to how they are engineered and the challenges faced. In the pursuit to do this, I have acquired a high degree of knowledge, from computer architecture to principles of software engineering. I am passionate about working with system security management and would like to focus on my research towards the domain of "Provably- Secure System Designs."

Academics:

Lancaster University

Masters in cyber security, UK

September 2020

Amrita Vishwa Vidyapeetham

Bachelor of Technology (B.Tech.) in Computer Science and Engineering, India

April 2019

Technical Skills:

- **Languages:** Python, PHP, Java, C, Nodejs
- **Operating Systems:** Redhat Linux, Debian, Windows
- **Virtualization Technology:** VMware, Oracle Virtual Box, Docker
- **Cyber Security Tools:** Metasploit Framework, Wireshark, Nessus and Burp suite

Research Interests:

- System security management
- Data security and privacy preserving protocol designs for Internet of Things
- Security in wireless communication technologies

Professional Certifications:

Red Hat Certified Engineer (RHCE) by Red Hat, License No. 170-138-911 (2017 - 2020)

Red Hat Certified System Administrator (RHCSA) by Red Hat, License No. 170-138-911 (2017 - 2020)

Certified Ethical Hacker (CEH) by EC-Council, License No. ECC022209621222 (2016 - 2019)

Professional Experience:

Security Analyst Intern at Infosec future Pvt Ltd, Lucknow, Uttar Pradesh, India for eight weeks in 2018

Redhat System Administrator Intern at Complete Open Source Solutions (COSS), for four weeks in 2017

Ethical Hacker Intern at Star computers, Visakhapatnam, India, for four weeks in 2016

Other Coursework:

- I. "Enterprise and Infrastructure Security" from **NYU-Tandon School of Engineering**, USA by Coursera, 2018
- II. "Introduction to Cyber Attacks" from **Tandon School of Engineering**, NYU, USA by Coursera, 2018
- III. "Ethical Hacking with Hardware Gadgets" from Udemy, 2018
- IV. "Modern Application Development" by IIT Madras and Hasura, July 2017

Training Programs:

- i. "Cyber Security for Industrial Control Systems-Attack Methodologies in IT & ICS" by Industrial Control systems Cyber Emergency Response Team **U.S. Department of Homeland Security**, September 2018
- ii. "Cyber Security for Industrial Control Systems- Cybersecurity within IT & ICS" by Industrial Control systems Cyber Emergency Response Team **U.S. Department of Homeland Security**, November 2018.
- iii. "Blockchain Development" by **Belfrics**, Malaysia for four weeks in 2018

Project Experience:

I. Cryptographically Secure On-Line Identity System (Master's Thesis - 2020):

This project is funded by Quantum Base and The Royal Society, UK. The Objective of the project is to develop a framework which utilizes a "Quantum Identities (QID's)" for authentication & validation of devices+. This project is primarily targeted for resource constrained devices such as IoT and mobile applications.

II. Secure communication using IPFS with IoT (Under Graduate Thesis - 2019):

This project is funded by Amrita Vishwa Vidyapeetham. The Objective of the project is to use Interplanetary file system protocol for secure point to point communication between the User and an IoT device, where the device can be operated without any use of third party vendor.

III. Cyber Physical System for safe transport system for LPG:

This project is funded by Amrita Vishwa Vidyapeetham. The Objective of the project is to design and develop a Cyber Physical System for safe transport system of Liquid Petroleum Gas (LPG) using ultra-sonic, MQ9 & DHT11 sensors which are linked to cloud.

IV. Crop Prediction System using Machine Learning algorithm:

This project is funded by Amrita Vishwa Vidyapeetham. The Objective of the project is to Design and Development a Crop Prediction System using Machine Learning algorithm(K-Means) in which the farmers are helped with a crop recommendation by knowing type of the soil and location, the intended time of sowing and the crop type. Implemented using PHP & MySQL.

Patents & Publications:

a.) Patents:

- I. Published a patent entitled "**A Framework For Secure Media Streaming Using InterPlanetary File System**" with an application **No.202141003380**, dated 25/01/2021 at Controller General of Patents and Designs and Trademarks, Govt. of India.
- II. Published a patent entitled "**Authenticated Secure Radio Communication Using Strong Physically Unclonable Functions**" with an application **No.202041052482**, dated 12/12/2020 at Controller General of Patents and Designs and Trademarks, Govt. of India.

b.) Publications:

- I. "**Securing Data in Cloud- A Physical Cyber System.**" Journal of Computer Science Engineering (ISSN: 2456-1843) Volume-3, Issue-12, December-2017, ISSN-2456-1843
- II. "**Access mechanism using inter planetary file system.**" International Journal of Engineering & Technology, Volume 7, No 4, 2018,ISSN: 2227-524X

Workshops Attended:

- I. Participated a two-day workshop on "**Ethical Hacking and Cyber Security**" held on 18th–20th February 2016, organized by Amrita School of Engineering, Coimbatore.
- ii. Participated a one-day workshop on "**Ethical Hacking**", E-Hack on 19th March 2016, organized by GITAM University, Bengaluru by infySEC.