EDUCATION

M.S - Computer Science

August 2017 — Present

Texas A&M University

B.E (Hons) Computer Science, M.Sc (Hons)

August 2009 — August 2014

Mathematics (7.94/10)

BITS-Pilani, K.K.Birla Goa Campus

WORK EXPERIENCE

Postman (API Tools)

June 2015 — July 2017

Software Engineer

- Mentored a team of three, guiding them through technical and non-technical issues.
- Lead developer & maintainer of Postman's CLI, Newman, which has 100K+ downloads each month (https://www.npmjs.com/package/newman)
- Worked on developing and finalizing the specification of the Postman Collection v2 format, which can be used for HTTP API definitions.
- Lead developer and maintainer of the Postman SDK, which is a Javascript SDK to help developers integrate with the Postman platform and services. (http://github.com/postmanlabs/postman-collection)
- Lead developer for Postman Runtime, which is the underlying engine behind Postman's cloud products and desktop
 applications (and the Newman CLI)
- Worked on various high-traffic services such as postman-echo.com, and the update server for Postman's app updates.
- Architected a domain verification system, which allows users to add their custom domains, which can be used across our cloud services (it features periodic checking of domains, handling invalidation notifications, etc)
- · Built an email service, which supports various sending backends (Sendgrid, SES, etc), and gathers basic analytics
- · Designed an SSL proxy, which uses SNI to serve the correct certificate, and routes traffic to an appropriate upstream
- Added support for various authentication protocols, such as AWSv4 signing, Hawk Authentication, OAuth1, NTLM Authentication, Digest Authentication, Basic Authentication, etc
- Implemented a multi-layered secure sandbox for executing user provided Javascript code

Amazon

July 2014 - March 2015

Software Development Engineer

- Re-architected a service that sends notifications to merchants and buyers over HTTP and email.
- Worked on various operational improvements, such as better logging, monitoring, etc
- Handled on-call rotations and emergency tickets.
- Worked on launch of Amazon External Payments in Japan, setting up the deployment stacks, deployment pipelines, etc.
- Implemented a parser and a reverse parser to convert config files to and from JSON, for easy manipulation and validation.

Google Summer of Code with The Honeynet Project

June 2013 — September 2013

Developer

- Worked on the Beeswarm IDS, which uses a system of intelligent clients, sessions (honeytokens) and honeypot servers to lure attackers.
- Implemented protocols such as FTP, SMTP, HTTP and VNC on the honeypot.
- · Created automated "intelligent" clients capable of logging into the honeypot servers and executing actions similar to humans.
- $\bullet \quad \text{Implemented a bootable ISO generation system, facilitating seamless deployment on servers and clients.}$
- Implemented parts of a web based interface to manage deployment of the honeypot clients and servers.
- GitHub Repository: https://github.com/honeynet/beeswarm

Hornet - SSH Honeypot

Feb 2014 — Present

Primary Contributor

- Designing and implementing an SSH honeypot that can simulate a network of different hosts.
- • Each host supports common Linux commands such as "echo", "ls", "ssh", etc.
- $\bullet \;\;$ The honeypot closely emulates a real Linux shell.
- $\bullet \quad \text{More information: https://github.com/czardoz/hornet}\\$

netSkope Software India Pvt Ltd.

July 2013 — July 2014

Intern

- $\bullet \quad \text{Created a web based platform from scratch for streamlined, automated testing of a network based software system.}\\$
- Came up with a system of recording and replaying HTTP(s) traffic.
- $\bullet \ \ Implemented \ features \ to \ automate \ component \ deployment, \ testing, \ and \ aggregation \ of \ test \ results.$
- Created a system to forward command line logs to the web-ui, in real time.

PUBLICATIONS

IEEE-FISTS: Development of a Protocol for optimized parking space allocation using Mobile Ad-Hoc Networks (MANETs). This project was selected for presentation at the IEEE-FISTS conference 2011, in Vienna.

- Developed a simple model for parking space allocation, modelled on a stationary Ethernet network.
- Implemented the software modules which communicated with each other using the TCP/IP protocol.