Kalyan R. Parajuli

Cybersecurity Masters Student @ Carnegie Mellon University

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Education

Aug 2021 – Present	**Master of Science in Information Security (MSIS)**, *Carnegie Mellon University*, Pittsburgh, PA **Courses:** Network Security, Network Forensics, Software Reverse Engineering, Applied Information Assurance, Cyber Risk Modeling, Introduction to Information Security, Introduction to Computer Systems
Sep 2014 – May 2018	**Bachelor of Science in Computer Science & Mathematics**, *Trinity College*, Hartford, CT **Courses:** Computer Security, Networks, Computer Systems, OS, Parallel Computing, Analysis of Algorithms

Skills

Languages	Python, Bash, Go, C, C++, Java, C#, JavaScript, Scala, SQL and noSQL Databases
Tools	Docker, AWS, Terraform, OpenShift, Jenkins, ELK, Splunk, Vault, Git, Unix/Linux

Experiences

Oct 2019 – July 2021	**Software Engineer**, Cigna Inc, *Bloomfield, CT* - Built a Python listener-orchestrator application for different processes on RHEL, AIX, and Windows machines - Implemented Vault, Cyrus-SASL, and GSSAPI for SSO and authentication with Kafka using Openshift - Managed and enhanced security and speed of deployments and pipelines with Jenkins, groovy and shell scripts - Analyzed source code using Veracode Scan and Bandit scan - Managed credentials retrievals and updates with Vault HTTP API - Wrote scripts/applets to automate routine tasks requiring low creative input
Sep 2018 – Oct 2019	**Business Intelligence Developer**, TicketNetwork Inc, *South Windsor, CT* - Developed a 4X faster multi-threaded multi-instance cache in ticket retrieval apps reducing AWS costs by 6% - Managed TN AWS cloud infrastructure hosting web services, databases, and storage with Terraform - Issued and supervised user & process access roles and rights with IAM Tool - Maintained AWS & on-premise network through VPC, Subnets, and NACLs - Researched better architecture and algorithm solutions for fast, secure, and economic use of infrastructure
May 2017 – Aug 2017	**Software Engineering Intern**, Acuity Brands Lighting, *New Haven, CT* - Led implementation of SHA hashes in applications for NIST Compliance - communicating with Testing teams - Fixed bugs, memory leak, and race-condition in networked lighting devices discovery and management software
Feb 2012 – May 2014	**Co-founder, Web Developer**, Bwingle Web Solutions, *Kathmandu, Nepal* - Designed custom websites using Python Django framework and mySQL - Built, deployed and maintained tailored WordPress and Drupal websites for small businesses and provided support

Projects

Secure Cloud Biometric Authentication, C++ & OpenGL
- Worked on Cloud Authentication with Iris Images protecting from compromise of either the server or the device
- Blinded bio-feature data with asymmetric keys requiring both server and device compromise for data compromise

Elliptic Curve Digital Signature Algorithm, Java & Python
- Implemented ECDSA using NIST Recommended Curve P-192 according to the standards published in P182-6

Notable Class Projects, C & Topomojo
- Wrote custom Dynamic Memory Allocator (malloc) using segregated lists & low overhead
- Built multi-threaded caching Web Proxy and multi-process Shell with signal handlers, pipes & IO redirections
- Built virtual labs with multiple hosts to implement OpenId & OAuth and to perform network attacks and forensics

Certifications

Cyber Forensics and Incidence Response Certification (pursuing), Carnegie Mellon University

AWS Certified Solutions Architect, Amazon Web Services

A100 Certified Full Stack Web Developer, IndieSoft Inc.

Volunteer and Leadership Roles

2020-Present	**Information Security Mentor**, gajabaar.io
2017 – 2018	**Vice-President**, International Student Association, Trinity College
2017 – 2018	**International Student Representative**, Multicultural Affairs Council, Trinity College