KALYAN R. PARAJULI

📞 (860) 952-9156   @ krparajuli@cmu.edu   in linkedin.com/in/krparajuli   ○ github.com/krparajuli

EXPERIENCE

Software Engineer - **Cigna Inc.**
📅 Oct 2019-Jul 2021   📍 Bloomfield, CT

Listener/Runner Orchestration and Secure Communication:
- Built a Python listener application orchestrating different Cigna processes on RHEL, AIX and Windows machines on demand or on schedules
- **Implemented Vault, Cyrus-SASL and GSSAPI** for SSO and authentication with Kafka for inter-process messaging. Deployed using Openshift

Continuous Integration / Continuous Delivery (CI/CD):
- Managed and enhanced security and speed of deployments and pipelines of various projects with Jenkins, groovy scripts and shell scripts
- **Analyzed source code** using Veracode Scan and Bandit scan
- Managed credentials retrievals and updates with Vault HTTP API

Scripting and POC for Innovation, Automation, and Security:
- Initiated and collaborated on multiple POC projects involving improvement security, design, data presentation and documentations
- Wrote scripts/applets to automate routine tasks requiring low creative input

Business Intelligence Developer - **TicketNetwork Inc.**
📅 Sep 2018-Oct 2019   📍 South Windsor, CT

AWS Infrastructure and Access Management:
- Provisioned and managed systems and clusters in AWS for highly available web services, databases, storage and backups with Terraform & Kubernetes
- **Issued and supervised user & process access roles and rights** with IAM Tool
- **Maintained AWS & on-premise network** through VPC, Subnets and NACLs

Better Cache and Infrastructure Implementation:
- Developed a **4X faster** multi-threaded multi-instance cache system than the existing one in TN ticket retrieval application **reducing AWS costs by 6%**
- Determined and initiated plans to implement better architecture and algorithm solutions for fast, secure and economic use of infrastructures

Software Engineering Intern - **Acuity Brands Inc.**
📅 May 2017-Aug 2017   📍 New Haven, CT

NIST Compliance and Network Fixes:
- Led the **implementation of SHA1 hashes** in Acuity Brands applications for NIST Compliance - communicating with development and testing teams
- Fixed bugs, memory leak and race-condition in networked devices discovery and management software controlling lighting devices in the LAN

Co-founder, Web Developer - **Bwingle Web Solutions**
📅 Feb 2012-May 2014   📍 Kathmandu, Nepal

CMS and Custom Websites Development:
- Designed custom websites using Python Django framework & mySQL
- Built, deployed and maintained tailored WordPress and Drupal websites for small businesses and provided support

CERTIFICATIONS

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

AWS Certified Solutions Architect (Feb 2019 - Feb 2021)
Amazon Web Services

A100 Certified Full Stack Web Developer
Apprentice 100, IndieSoft Inc.

EDUCATION

Master of Science In Information Security - **Carnegie Mellon University**
📅 Aug 2021-Dec 2022 📍 Pittsburgh, PA

- **Network Forensics:** Examining, understanding, exploiting networks and analyzing forensically
- **Applied Information Assurance:** Building, exploiting, and hardening vulnerable systems
- **Intro to Information Security:** Performing CTFs and cryptographic cracking w/ writeups
- **Intro to Comp. Systems:** Performed Reverse Engineering, Buffer Overflow and ROP attacks

Bachelor of Science in Computer Science & in Maths - **Trinity College**
📅 Sep 2014-May 2018 📍 Hartford, CT

- **Courses:** Computer Security, Networks, Computer Systems, Operating Systems, Parallel Computing, Analysis of Algorithms

PROJECTS

Secure Cloud Biometric Authentication
- Worked on Cloud Authentication with Iris Images on mobile devices 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; Used C++ & OpenGL

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

Notable Class Projects
- Wrote custom Dynamic Memory Allocator **(malloc)** using segregated lists & low overhead
- Built multi-threaded **caching Web Proxy**
- Wrote threaded **multi-process shell** program with signal handlers, pipes & IO redirections

SKILLS

Languages: Java, C#, JavaScript, Python, C, C++, Bash, Scala, SQLs, noSQLs, Android
Infrastructures: Docker, Jenkins, Vault, Terraform, Kubernetes, OpenShift

LEADERSHIP ROLES

InfoSec Mentor @ gajabaar.io **[2020-Now]**
Vice-President @ Trinity iHouse **[2017-18]**
International Student Representative @ TC Multicultural Affairs Council **[2017-18]**
Volunteer Soccer Coach [2016-21]