

Siddharth Arvind Singh

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PROFILE SUMMARY

Passionate cybersecurity professional transitioning from software development with a strong foundation in vulnerability assessment, automation, and systems integration. Experienced in scripting, debugging, and collaborating with stakeholders to resolve technical challenges. Certified in Google Cybersecurity and pursuing CompTIA Security+, with hands-on experience using tools like Wireshark, Nmap, and Metasploit. Eager to contribute by leveraging a detail-oriented mindset and cross-functional collaboration skills to identify, analyze, and remediate security risks.

WORK EXPERIENCE

Software Developer

CSGi

Toronto, Canada

June 2022 – Present

- Led onsite deployment for a major production release, troubleshooting and resolving pre- and post-deployment issues to ensure a successful system upgrade, enhancing operational stability.
- Collaborated with internal and external architects and clients to integrate their systems with ours using REST APIs, ensuring secure data flow through robust authentication, authorization, and strict adherence to API security best practices.
- Documented REST APIs using OpenAPI Specification (formerly Swagger), improving clarity and consistency, and reducing inquiries by 25%, while maintaining compliance with industry standards.
- Assisted in designing end-to-end workflows for projects, contributing to the development of scalable, reliable, and resilient solutions.
- Developed a solution that enabled peers and clients to maintain custom Python scripts, ensuring accessibility and usability while safeguarding the proprietary aspects of our language and systems, preserving confidentiality and intellectual property.
- Developed Perl, Python, and Shell scripts for various purposes on RedHat Linux systems, automating repetitive tasks while ensuring secure scripting practices and improving efficiency by 20%.
- Investigated and resolved API errors and technical issues on RedHat Linux systems, applying rapid, effective solutions to ensure stable client operations and minimizing disruption.
- Conducted performance testing of APIs to identify and capitalize on opportunities for improvement, achieving up to a 10% reduction in latency.
- Supported release deployments by troubleshooting and resolving time-sensitive, critical issues, demonstrating quick thinking and effective problem-solving to minimize disruptions and ensure successful rollouts.
- Reviewed sequence diagrams to ensure they aligned with project requirements, design specifications, and industry standards, contributing to the consistency and quality of the solution.
- Assisted and trained peers by offering support and guidance to help resolve complex issues, fostering a collaborative and knowledge-sharing environment.
- Demonstrated strong work ethic by taking ownership of tasks and consistently delivering results with minimal supervision.
- Displayed flexibility by readily working outside regular business hours and on weekends to ensure the successful completion of scheduled activities and smooth operations.

Software Developer

Public Authority for Civil Aviation

Muscat, Oman

September 2019 – November 2019

- Trained in secure programming, network security practices, and usability under the guidance of an Internship Coordinator, successfully completing two projects with an emphasis on security best practices and secure coding methodologies.
- Developed a secure FTP solution in C# using Visual Studio, implementing FTPS encryption to ensure private and safe file transfers.
- Designed an ERP solution using ASP.NET, allowing users to securely manage data with role-based access controls (RBAC) for safeguarding sensitive information.
- Evaluated the usability and access control of a database, ensuring robust data protection and user permission management to safeguard organizational data.

IT Support

Decoding IT Solutions

Muscat, Oman

June 2019 – August 2019

- Provided technical support for hardware and software, focusing on secure configuration, installation, and troubleshooting, as well as system hardening and patch management.
- Configured and administered ESXi hosts, installed VMs, and ensured proper security configurations and isolation to minimize risks.
- Troubleshooted ESXi host errors via SSH, ensuring secure access and maintaining system integrity.
- Contributed to various projects, including migrating email services from Exchange to Office 365, creating standardized system images for PCs, and managing network infrastructure including servers, firewalls, and switches.

CERTIFICATIONS

- Google Cybersecurity Certification *February 2025*
 - Hands-on work with security tools like Wireshark, Nmap, and Metasploit to perform vulnerability assessments, analyze network traffic, and assist in penetration testing.
- Pursuing CompTIA Security+

TECHNICAL SKILLS

- Programming Languages: Python, C++, C#, Java, Perl
- Version Control: CI/CD, Git, Azure DevOps, CVS
- IDEs: Eclipse, Android Studio, MS Visual Studio
- Agile Project Management: Jira, Azure DevOps, Lucidchart, Confluence
- Operating Systems: Windows (Client and Server), Linux (Ubuntu, Android, Kali Linux, RedHat)
- Virtualization: VMware vSphere, VMware vCenter, VMware ESXi
- Networking: Wireshark, Cisco Packet Tracker, TCP/IP, LAN/WAN, DHCP, DNS, IPv4/IPv6, Ethernet
- Web Technologies and Databases: HTML, Selenium, CSS, Microsoft SQL, MySQL, MongoDB, ChromaDB, Postman, SoapUI
- Cloud Services: Amazon AWS, Google Cloud, Microsoft Azure
- Office: Microsoft Word, Microsoft PowerPoint, Microsoft Excel, LibreOffice
- Knowledge of Unit Testing, Usability Evaluation and User Studies
- Security: Cyber Kill Chain, MITRE ATT&CK framework, OWASP Top 10, Splunk SIEM, Threat Analysis and Risk Mitigation, Incident response and recovery, Network security, Security tools and techniques

EDUCATION

Masters of Computer Science

Carleton University

CGPA: 11.1/12

Ontario, Canada

Graduation Date: February 2022

B.E. in Computer Science Engineering

Birla Institute of Technology

CGPA: 8.5/10

Muscat, Oman

Graduation Date: May 2019

RELEVANT COURSEWORK

Operating System Security, Adaptive Security, Distributed Operating Systems, Internet Measurements and Security, Mobile Commerce Technology, Software Usability, CompTIA IT Fundamentals (Online Certification from Udemy), Fundamentals of Network Security (Online Certification from Alison)

PROJECTS

Release Helper

April 2025

- Developed and implemented a Python-based pre-deployment automation tool (Fabric, Paramiko, JSON, Subprocess, ThreadPoolExecutor, Signal), eliminating manual execution steps.
- Reduced release preparation time from 30 minutes to 5 minutes, improving efficiency by 83.3%
- Enabled seamless parallel execution of pre-installation tasks across environment nodes (HUB/OCSs), ensuring completeness and error-free releases.
- Facilitated adoption among release support teams, streamlining deployment workflows and reducing manual effort.

Retrieval Augmented Generation

June 2024

- Developed an AI-based system to process multiple PDFs, enabling users to input questions and receive clear, concise answers derived from the PDF content.
- Using Ollama, embedding LLM (Nomic-embed-text), and general purpose LLM (Mistral).
- Written in Python using LangChain libraries and ChromaDB as the vector database.

Meta-Analysis; Carleton University

December 2021

- Master's Final Year Project | COMP 5903
- Meta-analysis of the computer science literature from 2000 – 2020
- Using Selenium in python, and NumPy in Python

Checking for Cookie Consent Banners; Carleton University

November 2020

- Internet Measurements and Security | COMP 5900
- Crawled websites for cookie consent banners, demonstrating an understanding of web security and privacy best practices.
- Using Selenium with Python.