

# Siddesh Vilas Pawar

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## Profile

Dedicated and experienced Cyber Security and Network Engineer with over six plus years of expertise in network security operations and management. Skilled in deploying, managing, and troubleshooting various network and security technologies, working on post-quantum cryptographic algorithms approved by NIST. Proven track record of enhancing network performance and securing enterprise environments, with experience in UNIX, TCP/IP, network fundamental accompanied with python.

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## Education

University of Surrey, MSc in Cyber Security

February 2025-February 2026

K.J. Somaiya college of Engineering, B.Tech in Electronics and Telecommunications

June 2014 - June 2018

Ramnarain Ruia Autonomous College (Higher Secondary Certificate Examination)

March 2012 - February 2014

## Work experience

**Cybersecurity Part-Time engineer (GDPR & Infrastructure Setup) | Londis, UK**

**Feb 2025 – till date**

- Assisting in setting up GDPR compliance processes and security protocols for the new BP petrol station infrastructure.
- Managing daily store operations, including customer service and sales transactions.
- Handling inventory and stock management while ensuring data protection and compliance.
- Developing strong time management and multitasking skills while balancing studies and work.
- Created asset management website, calculated Asset risk, deployed on Firebase, using react pushed on GitHub.

**Tata Consultancy Services, System admin**

**May 2022 – Jan 2025**

- Addressed network issues, enhanced performance, and resolved slowness concerns.
- Configured network devices from vendors such as Aruba, Meraki, Cisco, and AP from Aruba and Meraki.
- Managed IP address assignments using Infoblox, implemented URL blocking, and maintained MX, A, CNAME records.
- Monitored, configured, and troubleshooted Meraki devices and VMWARE VELO Edge devices.
- Specialized in authentication issues, configuring ClearPass, and planning upgrade and testing activities.
- Proficient in managing security appliances like Checkpoint, Cisco ASA, Cisco ACI, CISCO CSW, GCP, and resolving DMVPN connections.
- Experienced in load balancing and traffic checks using F5.
- Utilized monitoring tools such as SolarWinds, watchdog and ServiceNow for issue tracking and resolution.
- Worked on GitLab to push the code to GCP deployed firewall network in different project
- Successfully handled changes in CAB meetings and secured approvals.
- Have hands-on Qiskit SDK with modules namely Qiskit terra, qiskit aer to explore the PQC algorithms

**CSS CORP PVT LTD (now MOVATE), Technical Advance Consultant - Network Engineer**

**Feb 2021 – April 2022**

- Provided network solutions for users with Aruba ClearPass products on-premises or on-cloud.
- Conducted troubleshooting related to VMware ESXI or HP servers.
- Deployed ClearPass Policy Manager servers and configured various authentication protocols.
- Integrated with different controllers, NAS devices, and both on-prem and cloud-based AD.
- Installed extensions like Azure Intune, deployed ClearPass Policy Manager on cloud, and provided IAS.
- Configured AD CS, installed certificates in different formats on CPPM, and handled server upgrades.

**Unique Enterprise @Mumbai International Airport Ltd, Network Engineer**

**Aug 2019 – Feb 2021**

- Conducted daily tasks, including spam mail analysis, security and network device change management, and license management.
- Performed network and security monitoring and maintenance, new device installations, and port activations as per requirements.
- Worked with various vendors, including Cisco, Juniper, Checkpoint, FortiGate, and Palo Alto.

**Orient Technology**

**Oct 2018 – Aug 2019**

- Implemented Static IP subnet allocation for SMB services and VLANs on L2 switches.
- Developed troubleshooting skills for resolving issues in complex wireless network environments.
- Implemented OTP verification for customer secured login and DHCP option 82 for auto-login features.
- Resolved high latency issues in gaming through comparative analysis among different device

## Projects

- Automated configuration of OSPF on routers using Netmiko, Paramiko module of Python.
- Designed a Python script to monitor network interfaces using SNMP and send alerts to the administrator.
- Developed Python scripts for taking configuration backups of network devices using TFTP processes.
- Successfully migrated Juniper SRX3600 to Palo Alto as an internal firewall.
- Actively participating in the IETF workgroup on MPLS over IP Data packets, PQC migration for EU.
- Formed campus company which is on autopilot, where we can rent microcontrollers from libraries the way we borrow books.

## Skills

### Technical Skills:

- **Programming Languages:** C/C++, Java, Python, JavaScript, CSS, HTML, Django, GIT & GITHUB.
- **Networking Technology:** CCNA R&S, JNCIA (JUNOS), MPLS, BGP, OSPF, VRRF, VPN, RSTP, ISIS.
- **Security Technology:** Basics of Qraddar, Skyatp (Juniper), Fortigate(NSE1, NS2), Juniper Junos, checkpoint, cisco csw, cisco secure firewall, cisco ISE.
- **Networking Tools:** Amazon SANDBOX, GNS3, VMware Workstation, Pycharm, PTRG Network Monitoring.
- **Network Solution:** Aruba CPPM, Microsoft AD, Aruba controller, Azure Intune, LinkProof NG Radware LB.
- **Cloud Technology:** Amazon AWS, Microsoft Azure.
- **PQC TOOLS:** Qiskit SDK

## Appreciations

- Successfully received a letter of appreciation for network automation from GVK-Mumbai International Airport Ltd.
- Received a letter of appreciation from Makermela for the "Engistat AR app" project.
- Experience investigating network-based data for anomalies at Mumbai Airport.

## Achievements

- Winner of RC Nitro competitions pan India, including IIT Bombay Techfest and IIT Roorkee.
- Successfully organized IIT Bombay Technical event named "International Full-throttle Event 2019-20".

## Certification

- **ISC2 Certified in Cybersecurity (CC)** Certificate number: 2699643 Jul 1, 2025 - Jun 30, 2028
- Juniper Networks Certified Associate - Junos (JNCIA-Junos) from juniper learnings – (skills: networking)
- Fortinet : NSE 1, 2.

## Extra-Curricular

### Deloitte Australia Technology Job Simulation on Forage - October 2023:

- Completed a job simulation involving data analysis for Deloitte's Technology team, created a data dashboard using Tableau.
- Wrote a proposal for a client project to create a functioning dashboard, used Excel for data classification, and drew business conclusions.

### RC NITRO RACING:

- Travelled to Indian institutes that organized various technical events and have participated and won multiple RC nitro car racing awards, like IIT BOMBAY TECHFEST, IIT CHENNAI

## Dissertation

**Design and Evaluation of StrongVPN:** A Pure Post-Quantum VPN Architecture *Submitted to University of Surrey*

- Designed a full VPN architecture leveraging lattice-based key encapsulation mechanisms (ML-DSA AND ML-KEM) and reduction optimizations for post-quantum performance.
- Designed and evaluated the StrongVPN protocol stack more focused on resilience against quantum-capable adversaries, cryptographic agility, and performance under constrained environments, also deployed using EC2 multi regional instances.(evaluation against VPN standards IPsec/OpenVPN/WireGuard).
- Conducted benchmarking of PQC primitives, network performance analysis, and comparative evaluation against classical VPN protocols.

## Publication

**Siddesh Vilas Pawar, Liqun Chen. "Design and Evaluation of StrongVPN, a Pure Post-Quantum VPN Architecture." TechRxiv, November 18, 2025.**

DOI: [10.36227/techrxiv.176127352.21222483/v2](https://doi.org/10.36227/techrxiv.176127352.21222483/v2)

**Keywords:** lattice-based cryptography, ML-DSA, ML-KEM, Montgomery reduction, post-quantum cryptography, VPN architecture, secure communication protocols