Justin (Jashandeep) Bains

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Education

Honours Bachelor of Computer Science (BCS), University of Waterloo, Waterloo, ON   **September 2019 – August 2023**

Relevant Coursework: Computer Networking, Computer Security and Privacy, Database Systems, Application Development, Operating Systems, Introduction to Artificial Intelligence, Algorithm Design and Data Abstraction, Mathematical Statistics, User Interface Design, Applied Linear Models, Sampling and Experimental Design

Certifications

- **Cisco** CCNA
- **CompTIA** Security+
- **CompTIA** Network+
- **CompTIA** A+
- **GCP** Associate Cloud Engineer

Professional Summary

Network-focused IT professional with hands-on experience in network monitoring, troubleshooting, documentation, and incident/change management. Skilled in LAN/WAN, peering, VLANs, routing, switching, and security infrastructure (firewalls, VPNs, NAT). Proficient with Cisco devices, SNMP, and open-source monitoring tools. Strong communicator and team player, eager to transition into a Network Operations Centre (NOC) Analyst role.

Professional Experience

Technical Fullstack Consultant, Logistics Startup   **November 2025 – Present**
- Setting up cloud infrastructure and CI/CD pipelines for a logistics startup to streamline operations and improve efficiency
- Designed and implemented scalable cloud architecture using Microsoft Azure services, including Azure App Service, Azure SQL Database, and Azure Functions
- Managed Azure Active Directory (Entra ID) for user authentication and authorization, ensuring secure access to resources
- Configured secure hosting environments with SSL/TLS, automated backups, and monitoring using Azure Monitor
- Established email systems using Microsoft 365, including custom domain setup, user provisioning, and security configurations
- Developed fullstack web applications utilizing Astro framework, ensuring responsive design and optimal performance
- Implemented IT best practices, including documentation, version control with Git, and agile development methodologies

Freelance IT Infrastructure Consultant, Self-Employed   **April 2025 – November 2025**
- Delivered technical consulting services for Lion's Appliance Repair and an emerging logistics startup, focusing on infrastructure optimization, cloud integration, and network security
- Architected and built a comprehensive on-premise laboratory environment to validate enterprise networking and security configurations (Cisco, Kubernetes, Azure) before client deployment
- Achieved Cisco CCNA and GCP Associate Cloud Engineer certifications through intensive full-time professional development and practical application
- Designed secure network architectures implementing VLAN segmentation, firewall hardening, and VPN tunnels, directly applying advanced infrastructure concepts to solve business challenges

Cloud Infrastructure Monitor and Technical Support, Lion's Appliance Repair   **June 2024 – April 2025**
- Provide L2/L3 support for cloud infrastructure, resolving OpenProject tickets related to networking, security, and system performance
- Aligned the development with the principles and best practices of web design
- Migrated AWS architecture to Cloudflare, cutting costs while maintaining security, performance, and scalability
- Used Terraform to create secure and reusable infrastructure modules for cloud environments
- Migration of applications using Dockerfiles for use in Kubernetes cluster and event-driven software to a serverless implementation

Tax Accountant, H&R Block   **January 2024 – April 2024**
- Demonstrated attention to detail in preparing accurate tax returns, highlighting precision in tasks, earning the Top Performer Award
- Helped mediate the transition to a new software system, including writing documentation and helping train staff. Resulting in the location completing the most returns on the new system
- Communicated complex information clearly to clients with varying levels of technical and financial knowledge
- Delivered customer-facing support, Resolved conflicts and de-escalated situations with upset or frustrated clients

Fullstack Developer, Lion's Appliance Repair   **August 2023 – November 2023**
- Designed and implemented automated billing pipelines with Google Apps Scripts, reducing weekly manual processing time by 90%
- Established CI/CD workflows using GitHub Actions to automate testing, build processes, and production deployments
- Developed internal tooling and employee portals using Python (Django/Flask), streamlining operational workflows
- Integrated data processing pipelines using scikit-learn and Pillow for automated image manipulation and analysis
- Developed a responsive company website with modern web stack: HTML, CSS, JavaScript, TypeScript, Node.js, Astro, and React
- Engineered and deployed a full-stack web platform using Node.js, React, and Astro, focusing on performance and SEO optimization
- Built web applications for employee landing pages using Python, Django and Flask, ensuring robust and maintainable code

Fullstack Developer, Oakville Town Taxi   **April 2020 – October 2020**
- Managed the full application lifecycle of a high-traffic booking platform hosted on AWS S3, ensuring 99.9% uptime
- Hardened application security and optimized performance by implementing AWS Secrets Manager, load balancing, and TLS encryption
- Architected automated deployment pipelines (CI/CD) using GitHub Actions, eliminating manual release errors
- Led the development of a responsive website with AWS S3 using HTML, CSS, JavaScript, and NodeJS
- Enhanced site security, speed, and user experience via AWS Secrets Manager, load balancing, caching, compression, and encryption

IT Setup Assistant, AA Taxi   **June 2018 – July 2018**

- Assisted with the installation and configuration of radio communication systems, computer hardware, and dispatch software under the guidance of senior staff
- Supported setup activities, including basic wiring, imaging, and software installation, gaining foundational experience in IT operations
- Troubleshot Windows OS, Microsoft 365, and application issues for end-users, ensuring minimal downtime
- Assisted with setup of laptops/desktops, configured peripherals, user provisioning and access management
- Maintained and updated technical documentation, change logs, and knowledge base articles
- Authored user-friendly documentation outlining setup procedures, wiring diagrams, and basic troubleshooting steps for staff reference

Volunteer & Extracurricular Experience

AV Helper, Robert Bateman High School (Grades 9-10)   **September 2016 – June 2017**
- Assisted with setup, operation, and troubleshooting of audio-visual equipment for school assemblies, events, and presentations
- Supported local events hosted in the school with projector, microphone, and sound system configuration
- Gained hands-on experience with basic AV wiring, equipment maintenance, and event logistics

Audio-Visual Volunteer, Local Gurudwara   **June 2017**
- Helped install and organize cabling for the Gurudwara's sound system, including speaker placement and wiring
- Assisted in first time install, setup and labeling the AV cabinet for easier access and maintenance

Projects

Hybrid Infrastructure Network Engineering Lab (CCNA Azure Focus)   **April 2025 – Present**
- Designed and deployed a cost-effective hybrid infrastructure using a self-hosted Kubernetes cluster, Azure Web App Service, and Cloudflared tunnels for secure inter-network communication
- Implemented enterprise networking: Cisco Catalyst 3650 switches with VLANs/QoS, FreeRADIUS for 802.1X, and ISC Kea DHCP
- Architected a self-hosted observability stack (Prometheus, Grafana, Loki) to replicate Azure Monitor, tracking hardware metrics (IPMI, SNMP) and application logs
- Hardened security posture using CIS benchmarks for RHEL, AppArmor for Debian, and Kubernetes NetworkPolicies for east-west traffic segmentation
- Configured high-availability components: LACP for network redundancy, redundant power supplies, and automated certificate rotation via cert-manager
- Developed custom monitoring solutions: Energy efficiency tracking (GFLOPS/watt), switch ASIC utilization, and custom SNMP exporters
- Rebuilt the Azure Monitor stack locally by self-hosting and integrating Prometheus, Grafana, and Loki for unified, multi-layer Kubernetes monitoring and alerting
- Configured automated certificate rotation for cluster components using cert-manager with Cloudflare TLS/SSL certificates and internal CA for private services
- Streamlined log aggregation with Fluent Bit for parsing and enriching log data before ingestion into Loki
- Expanded cluster with Cisco Catalyst 3650 switches implementing VLANs for network segmentation and QoS policies for traffic prioritization
- Configured redundant power supplies and network paths using LACP for high availability
- Instantiated High Availability CoreDNS for reliable service discovery within the LAN
- Developed custom metrics exporters for monitoring switch health and network throughput via SNMP
- Enforced application segmentation through NetworkPolicy objects governing east-west traffic between microservices
- Implemented system-level controls: RHEL nodes with CIS benchmarks, Debian control plane with AppArmor profiles
- Configured Cloudflared tunnels with TCP stream termination at the edge router before reaching NodePort services
- Extended Prometheus monitoring to track: Per-node power draw via IPMI BMC sensors, Wattage efficiency (GFLOPS per watt) for compute workloads

Residential Network Installation
- Designed and installed structured cat6 cabling systems for residential properties with patch panels and keystone jacks

Game Simulation Framework & Analytics Platform (Open Source)
- Performed ETL (Extract, Transform, Load) on raw gameplay telemetry to ensure accurate data for modeling and analysis
- Implemented statistical and forecasting models for in-game economy and player behaviour using Python and Pandas
- Built Grafana dashboards to visualize simulation results, KPIs, and forecast metrics
- Designed and implemented ETL pipelines ingestion and normalized gameplay telemetry into MongoDB for analysis and downstream dashboards
- Ensured code quality through modular design, testing, and documentation to support collaborative development
- Managed the GitHub organization: provisioned collaborators, configured teams, repository permissions, and branch protection policies
- Administered Azure Active Directory (Entra ID) for the project tenant: provisioned users/groups, configured RBAC, and managed service principals/managed identities for secure CI/CD workflows

Penetration Testing
- Executed stored and reflected cross-site scripting (XSS) attacks, performing session hijacking to gain unauthorized access
- Conducted SQL injection attacks, extracting database information and injecting administrator credentials to escalate privileges

- Documented vulnerabilities with CVSS scoring and recommended remediation strategies including input validation and parameterized queries
- Tested network services for vulnerabilities using Nmap and Metasploit framework

OpenFlow Mininet Routing
- Configured and analyzed Software-Defined Networking (SDN) routing policies using OpenFlow in a Mininet simulation
- Designed and implemented network traffic management strategies, optimizing data flow and security in virtualized environments
- Investigated network segmentation and access control techniques to enhance security and performance in simulated SDN networks
- Developed custom controllers using Python and POX for traffic engineering experiments

Skills

Networking: LAN, WAN, Core Networking, VLANs, VRFs, OSPF, BGP, DHCP, DNS, Peering, Wave, Cisco IOS/NX-OS, LACP, QoS, NAT, Firewalls, VPNs, SDN (OpenFlow), 802.1X, RADIUS, LDAP, CDP

Security: IDS/IPS (Snort, Suricata), SIEM (Splunk, Prometheus, Grafana, Loki), mTLS, PKI, Network Hardening, Incident/Change Management, Documentation, Wireshark, Network Policies, Hardened Kubernetes

Monitoring: Prometheus, Grafana, Splunk, Loki, SNMPv3 (Cisco), IPMI/BMC, IMNI, NetFlow, sFlow, Open-source NMS, Test Equipment

Cloud/DevOps: Microsoft Azure, Azure Active Directory (Entra ID), Azure Arc, Kubernetes (k8s/k3s), Docker, Containerd, Podman, Terraform, Ansible, Jenkins, Drone, GitHub Actions, Azure Pipelines, ArgoCD

Programming Languages: Python, JavaScript, TypeScript, Java, C++, C, Bash, PowerShell, Go, R, SAS

Frameworks: Kubespray, Flask, React, TensorFlow, Keras, FastAPI, Node.js, Astro

Databases: MongoDB, SQLite, MySQL, PostgreSQL, Elasticsearch, Redis

Operating Systems & Scripting: Red Hat Enterprise Linux (RHEL), Debian, Windows Server, GNU/Linux

Lab Hardware: Cisco Catalyst 3650 Switches, Dell PowerEdge Servers, Raspberry Pi Clusters, Patch Panels, Structured Cabling (Cat6), UPS Systems

Methodologies: Agile, Scrum, Kanban, ITIL v4, DevOps, CI/CD, GitOps, Infrastructure as Code (IaC)

Tools: Git, Jira, Vanta, Postman, LaTeX, Mininet, WireGuard

Technical Support: Windows 10/11, Microsoft 365, laptop/desktop setup, imaging, peripheral configuration, troubleshooting hardware/software issues, onboarding/offboarding, Active Directory, user account management, ServiceNow, Jira, ticketing systems, ITIL principles