

# Tushya Iyer

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## PROFILE

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HPC and infrastructure specialist with 4+ years of experience administering Linux-based compute clusters and supporting scientific R&D teams. Managed SLURM-scheduled HPC environments running molecular dynamics simulation workloads, with hands-on experience in storage management, job scheduling, and deploying compiled scientific software (Fortran/C++, CUDA). Strong background in Linux systems administration (RHEL/Ubuntu), containerization, observability (Prometheus, Grafana, Zabbix), and scripting (Bash, Python, Go). Formal academic grounding in database systems and data mining complements hands-on work in research data infrastructure. Strong personal interest in distributed systems and parallel computing. Continuous learner who enjoys staying current with emerging technologies and finding better ways to solve problems. Avid Linux user and open-source enthusiast.

## SKILLS

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**Cloud & DevOps:** Azure, Azure DevOps (Pipelines, Repos, Boards, Wiki), AWS, GCP, Terraform, CloudFormation, Infrastructure as Code, CI/CD Automation

**Virtualization & Compute:** HPC Clusters, SLURM, RHEL, VMware ESXi, vSphere, Hyper-V, Docker, Kubernetes

**Windows & Microsoft:** Windows Server (2016/2019/2022), Active Directory, Group Policy, M365/Office 365, Exchange Online

**Networking & Protocols:** Network Design, Fortinet Firewall, VPN (Site-to-Site, Remote Access), VLANs, DNS/DHCP, NFS, SMB, LDAP, NTP, Network Security

**Scripting & Automation:** PowerShell, Bash, Python, Go, Ansible, SQL, YAML, Terraform HCL, Git

**Observability & Support:** Prometheus, Grafana, Zabbix, TimescaleDB, Veeam B&R, System Diagnostics, Documentation, Tier 1/2/3 Support

## EDUCATION

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**British Columbia Institute of Technology**

*B.Sc. in Applied Computer Science; Major in Database GPA: 87%*

*Computer Information Technology Diploma GPA: 90%*

Burnaby, Canada

*Sep 2021 – Dec 2025*

*Sep 2019 – Dec 2021*

## PROFESSIONAL EXPERIENCE

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**Svante Technologies Inc.**

*IT Infrastructure Analyst*

Burnaby, Canada

*February 2022 – Present*

- Architected and administered HPC cluster supporting R&D scientists: managed SLURM job scheduling, user account management, OS and software environment, and deployed molecular dynamics software (Fortran/C++, CUDA), maintaining 99.9% system availability
- Provided training and hands-on support to HPC users, including guidance on job submission, resource allocation, software compilation, and environment reproducibility using containerization
- Architected real-time research data observability platform using TimescaleDB, Prometheus, and Grafana for manufacturing test equipment, processing 1000+ data points per second with automated alerting, dashboard visualizations
- Led software technical assessments and vendor evaluations for cloud simulation platforms and backup software, gathering business requirements and analyzing solutions based on features, security, and cost-effectiveness
- Configure and maintain network infrastructure including Fortinet firewalls, site-to-site VPN tunnels, VLANs, NFS/SMB shares, LDAP, and DNS/DHCP to support research and office environments
- Orchestrated enterprise migration of 10+ physical servers to VMware ESXi 8.0 infrastructure, configuring vCenter, virtual networking, distributed switches, and storage policies for production workloads
- Administer Windows Server 2019/2022 environment including Active Directory, Group Policy, and DNS services, ensuring 99.9% uptime for critical business services
- Implemented and maintained Azure DevOps CI/CD pipelines for NodeJS applications, integrating automated security scanning, Docker image builds, and deployment automation, reducing deployment time from 2 hours to 15 minutes

- Designed and implemented enterprise backup and disaster recovery infrastructure using Veeam B&R with Azure blob storage, achieving 100% compliance with 3-2-1-1-0 backup strategy across 10+ critical systems
- Created and maintain comprehensive IT documentation portal standardizing processes for system administration, troubleshooting, support escalation, and change management
- Developed Go-based integration between HR software API and Active Directory, automating user provisioning, group membership management, and offboarding processes, reducing onboarding time by 70%
- Mentor and train junior IT staff and co-op students on infrastructure best practices, Linux & Windows administration, scripting, troubleshooting methodologies, and DevOps processes

## **New Beta Innovation Ltd.**

Burnaby, BC

*Help Desk Co-op*

*Dec 2020 – Aug 2021, Full-time*

- Provided tier 1 technical support for Windows 10/Server 2016 environment, Active Directory, Office 365, and network connectivity issues, maintaining SLA compliance with average 2-hour response time
- Developed and implemented PowerShell automation framework for user lifecycle management including account creation, group membership, mailbox provisioning, and permission assignment, reducing provisioning time by 80% and ensuring consistent security policies across 200+ users
- Architected and documented comprehensive backup and disaster recovery strategy compliant with GMP requirements using Veeam, achieving 100% recovery success rate in quarterly DR tests and maintaining RPO/RTO objectives
- Collaborated with network team on VPN configuration, firewall rule changes, and network troubleshooting to support remote workforce during COVID-19 transition

## **PERSONAL EXPERIENCE**

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### **Distributed Password Cracker** | BCIT | [GitHub](#)

- Distributed password cracking application using Go, implementing client-server architecture for parallel processing of hash cracking tasks across multiple worker nodes
- Utilized goroutines and channels for concurrent task execution, optimizing CPU utilization and reducing overall cracking time compared to single-threaded implementations
- Implemented TCP-based communication protocol for task distribution and result aggregation, ensuring reliable data transmission and fault tolerance in case of worker node failures
- \*Disclaimer: This project is intended for educational purposes only and assigned by a BCIT Instructor. This project will not be used for any malicious activities.\*

### **Neuroware AI**

Vancouver, Canada

*CTO*

*February 2025 – Present*

- Built Neuroware Cloud MLOps platform using React, TypeScript, and Docker for one-click deployment of LLMs across AWS and GCP infrastructure, turing Stripe subscription billing and automated user management
- Implemented full-stack SaaS solution with programmatic infrastructure deployment, executing Terraform and CloudFormation through TypeScript code to provision cloud resources
- Engineered Cloud Harvester IoT data pipeline processing real-time telemetry from 10k+ devices using MQTT protocol and Go-based ingestion services
- Built Cloud Harvester analytics dashboard with React and TypeScript, visualizing time-series data stored in TimescaleDB and providing device status monitoring capabilities
- Designed system architecture using C4 modeling methodology for both platforms, ensuring scalable deployment across AWS infrastructure
- Delivered end-to-end solutions from concept to production, managing full development lifecycle for both revenue-generating products

### **Train Travellers API** | BCIT | [GitHub](#)

- Deployed containerized microservices architecture using Docker and docker-compose, orchestrating 5+ services with inter-service networking and persistent volume management for stateful applications
- Implemented event-driven messaging infrastructure using Apache Kafka for async processing, configuring topic partitioning and replication for high availability and fault tolerance
- Designed and automated CI/CD pipeline using Jenkins with multi-stage builds, incorporating automated testing, container security scanning, and automated deployment to staging environments
- Conducted comprehensive load testing using Apache JMeter, achieving <100ms response time for 95th percentile under 10000+ concurrent requests, validating horizontal scalability