# Qi Dang

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# **Cloud Software Engineer**

An innovative Cloud Software Engineer with **3 years** of experience specializing in designing, building, maintaining, and optimizing **cloud-based applications** and backend systems across **AWS**, **Microsoft Azure**, and **GCP**. Skilled in **software development**, **full stack engineering**, **cloud infrastructure**, and **automation**, delivering high-quality solutions using **Python**, **Node.js**, and **React**. Proven track record in leading the development of automated **CI/CD** pipelines, integrating **cloud monitoring** and **logging** solutions, and streamlining deployment processes to enhance operational efficiency, reliability, and security. Key contributor to launching **large-scale distributed systems** like <u>HP Anyware for Windows 365</u> in partnership with Microsoft, ensuring scalable, reliable, and repeatable performance. Passionate about emerging **web** technologies, **DevOps** practices, and building ergonomic **APIs** to automate processes, improve system reliability, and deliver seamless user experiences while reducing operational overhead.

## **Key Skills**

Software Development Life Cycle (SDLC) | Cloud Engineering | Web Technologies | Distributed Systems | Microservices Architecture | Automated Solutions | DevOps | Agile | Project Management | Troubleshooting | Problem Solving

## **Technologies and Tools**

- Programming Languages: Python, JavaScript, Bash, PowerShell, SQL
- Cloud Computing:
  - AWS: VPC, EC2, S3, CloudWatch, SES, WAF, ELB, Lambda, EKS
  - Microsoft Azure: Virtual Network, Virtual Machine, App Service, App Gateway, Storage account, Key Vault, Azure Monitor, AKS
  - GCP: VPC, Compute Engine, Cloud Storage, Cloud Monitoring, GKE
- Web Development: React, Node.js, Express.js, Django, Flask, Redux, Redis, HTML/CSS
- Databases: MongoDB, PostgreSQL, MySQL
- DevOps & Automation: Terraform, Ansible, Docker, Kubernetes, TeamCity, GitHub Actions, Jenkins
- **Event Streaming**: Kafka
- Testing & Best Practices:
  - Techniques: Unit Testing, Integration Testing, Test-Driven Development (TDD), Load Testing
  - o Tools: unittest, pytest, JTest, Jest

## **Work Experiences**

HP Inc, Vancouver, BC January 2023 – Present

### **Cloud Software Engineer**

- Key contributor to the launch of <u>HP Anyware for Windows 365</u>, a joint HP/Microsoft project, collaborating with cross-functional teams to build mission-critical features and ensuring scalability and reliability.
- Developed web applications using **Node.js** and **React**, leveraging **Docker** and **Azure** services to create elegant user experiences and intelligent orchestrations.
- Led **technical design** and implementation for key features, including **RESTful API** design, optimizing system algorithms to enhance processing efficiency by **30-70%** and improving production operation.
- Designed a **logging** and **monitoring** solution with **Azure Monitor**, collected and filtered logs to display critical issues on a dashboard, reducing debugging time by **30%**.
- Integrated **Microsoft Graph API**, implementing a batching mechanism that reduced API calls by up to **80%**, significantly improving data upload performance and resource efficiency.

- Developed and managed marketplace products on **AWS** and **GCP**, implemented automated **CI/CD** pipelines with **TeamCity** and **Ansible** to build cloud images, ensuring users had seamless access to the latest product versions.
- Established robust rollback mechanisms to quickly revert to previous versions in case of deployment errors, minimizing downtime and maintaining service reliability.
- Contributed to the architecture, design, and testing of various system components, ensuring reliability and scalability of the application.

#### HP Inc, Burnaby, BC

September 2021 – August 2022

#### **Associate Software Developer Co-op**

- Developed and maintained **Terraform**, **Bash**, **PowerShell**, and **Python** <u>cloud deployment scripts</u> to automate the process for customers to build the HP Anyware product (**SaaS**) environment on **AWS** and **GCP**.
- Integrated cloud logging and monitoring services to improve efficiency for troubleshooting and scaling on AWS and GCP, reducing log access time by 50%.
- Participated in the full SDLC of open-source projects, improving secure remote access and streamlined workflows on AWS and GCP, reducing operational overhead by 20%.
- Built durable interfaces for internal tools, streamlining developer productivity through automation and CI/CD pipelines.
- Worked on incident management and troubleshooting for Kubernetes deployments, reducing downtime through
  effective issue resolution and enhancing system observability.

# Intellyon Inc, Burnaby, BC

May 2021 - August 2021

# Junior Backend Developer & Systems Engineer Co-op

- Designed and maintained backend systems using Python and AWS, focusing on REST API design and
  implementation to facilitate seamless data integration across services. Secured the system with a custom Web
  Application Firewall (WAF) that successfully rejected over 1,000 injection attempts and DDoS attacks, enhancing
  overall security and system resilience.
- Utilized AWS Auto Scaling and Elastic Load Balancer (ELB) to enhance application performance, reliability, and scalability, increasing backend capacity by 100% and enabling automatic scaling to handle fluctuating traffic.
- Enhanced user experiences by integrating **Python** OpenCV for video processing and timeline generation.
- Developed an admin portal using **Django** with durable, composable data models to manage user accounts and content.
- Implemented and maintained user notification system with Python and AWS SES.
- Participated in the design and management of a PostgreSQL database, ensuring reliable data handling for business needs.

# Tomley's Market, Victoria, BC

April 2018 - April 2020

#### Store Manager/Owner

- Responded to customers' inquiries, complaints, and requirements in a timely and professional manner.
- Managed weekly planning, including employee scheduling, delivery schedules, and stock management.
- Hired new employees, provided work safety training, and integrated them into the team.
- Maintained supplier relationships to ensure smooth operations.

## **Education**