

## Qi Dang

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### Software Engineer

An innovative Software Engineer with over **3 years** of experience specializing in designing, building, maintaining, and optimizing **cloud-based applications** and **backend systems** across **AWS, Azure, and GCP**. Skilled in **software development, full-stack engineering, cloud infrastructure, and automation**, delivering high-quality, scalable solutions using **Python, JavaScript/TypeScript, Node.js, Java, 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. Experienced in designing and implementing **RESTful APIs**, leading **feature development**, and collaborating with **cross-functional teams** to deliver high-impact solutions. Passionate about **emerging 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 | Infrastructure as Code (IaC) | DevOps | Agile | Project Management | Troubleshooting | Problem Solving

### Technologies and Tools

- **Programming Languages:** Python, JavaScript/TypeScript, Java, Bash, PowerShell, SQL
- **Cloud Computing:**
  - AWS: IAM, VPC, EC2, S3, RDS, DynamoDB, CloudWatch, SES, WAF, ELB, Lambda, EKS
  - Microsoft Azure: IAM, Virtual Network, Virtual Machine, CosmosDB, App Service, App Gateway, Storage account, Key Vault, Azure Monitor, AKS
  - GCP: IAM, VPC, Compute Engine, Cloud Storage, Cloud Monitoring, GKE
- **Web Development:** React, Node.js, Express.js, Django, Flask, Spring Boot, 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
  - Tools: unittest, pytest, JTest, Jest

### Work Experiences

HP Inc, Vancouver, BC

January 2023 – December 2024

#### Cloud Software Engineer

- Key contributor to the launch of [HP Anyware for Windows 365](#), a joint HP/Microsoft project, collaborating with **cross-functional** teams to build **mission-critical features** and ensuring scalability and reliability.
- Developed customer-facing 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.
- Led **troubleshooting** and **incident management** by designing and implementing **logging** and **monitoring** solutions with **Azure Monitor**, which enhanced system observability and reduced debugging time by **50%**.
- Contributed to the cloud workload management by integrating **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.

**HP Inc**, Burnaby, BC

**September 2021 – August 2022**

#### **Associate Software Developer**

- Developed and maintained **Terraform**, **Bash**, **PowerShell**, and **Python** [cloud deployment scripts](#) 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 **30%**.
- Created robust interfaces for internal tools, enhancing developer efficiency through **automation** and **CI/CD pipelines**.
- Managed **Kubernetes** deployments and **incident resolution**, enhancing system reliability and reducing downtime.

**Intellyon Inc**, Burnaby, BC

**May 2021 – August 2021**

#### **Junior Backend Developer & Systems Engineer**

- Designed and maintained backend systems using **Python** and **AWS**, focusing on **REST API design** and implementation to facilitate seamless data integration across services, while leveraging **Django** for creating durable, composable data models.
- Secured backend systems with customized **AWS 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.
- Implemented user notification system with **Python** and **AWS SES** to enhance user engagement and retention by delivering personalized email updates, resulting in a **25%** increase in user interaction with the platform.
- Participated in the design and management of a **PostgreSQL** database, ensuring reliable data handling for business needs.

### **Personal Project**

#### **E-Commerce Platform**

**Dec 2024 – Mar 2025**

Backend: <https://github.com/QI-D/ecommerce-backend>

Frontend: <https://github.com/QI-D/ecommerce-frontend>

- Developed a scalable **backend system** using **Java** and **Spring Boot**, implementing **RESTful APIs** for user authentication, product management, order processing, and category management.
- Built a responsive **frontend** using **React** and **React Context API** for state management, with **reusable UI components** for seamless user interaction.
- Structured a **MySQL** database schema to efficiently manage user, product, and order data.
- Integrated **Spring Security** for secure **authentication** and **role-based access control (RBAC)**.
- **Containerized** the backend and frontend with **Docker** and orchestrated services using **Docker Compose** for simplified local and production deployment.

### **Education**

**Diploma, Computer Information Technology, With Distinction**  
British Columbia Institute of Technology, Vancouver, BC

**2022**