Kazem Bigdeli

Cloud and AI Infrastructure Engineer
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Cloud and AI infrastructure engineer (M.Sc., Politecnico di Torino) building Kubernetes platforms at the multi-cluster, scheduling and networking layer. Writes Go controllers, automates infrastructure end to end, and is now focused on GPU compute, AI networking and orchestration. NVIDIA-Certified Associate in AI Infrastructure and Operations.

EXPERIENCE

Research Fellow · Politecnico di Torino · Turin · 04/2024 – Present *(with breaks)*

- Working on AI workload optimization for telco edge data centers; designed the infrastructure architecture for the FiberCop telco edge network.
- Building federation-autoscaler: a Cluster Autoscaler extension that borrows compute across federated clusters as virtual nodes via Liqo (Go, kubebuilder, gRPC, mTLS); validating on a 6-cluster k3s federation.
- 4 merged pull requests to Liqo (CNCF ecosystem); energy monitoring with Prometheus, Grafana and Kepler; Ansible automation for a 4-node edge testbed.

Cloud-Native Engineer Intern · Engineering Group · Pont Saint Martin · 10/2025 – 04/2026

- Sole author of liqo-upgrade-operator: 3-stage upgrade with health gates and automatic rollback; cut peering downtime to ~30 s. Published Helm chart on Artifact Hub.

System Administrator · MPP Holding · Iran · 07/2021 – 07/2023

- Ran 2 servers with ~20 VMs for ~100 users; automated backups; hardened Cisco, MikroTik and Sophos network perimeter.

PROJECTS

- **aws-landing-zone**: Terraform landing zone, multi-AZ VPC, EKS with IRSA, credential-less GitHub OIDC pipeline.
- **gitops-k8s-platform**: Argo CD and Helm delivery, GitHub Actions to GHCR, burn-rate SLO alerts.

CERTIFICATIONS

- **NVIDIA-Certified Associate: AI Infrastructure and Operations** (11/2026) · **MikroTik MTCWE** (2018) · **MikroTik MTCNA** (2017)
- In progress: NVIDIA NCP-AIO (AI Operations), NCP-AIN (AI Networking)

SKILLS

- **AI infrastructure:** NVIDIA software stack · InfiniBand, RoCE · DCGM · MIG, vGPU · Slurm
- **Kubernetes:** Kubernetes · Helm · Kustomize · KubeVirt · Go · kubebuilder · CRDs and operators
- **Cloud and automation:** AWS · Azure · Terraform · Ansible · GitHub Actions · Argo CD · Prometheus · Grafana
- **Networking and systems:** routing and switching (CCNA self-study) · MikroTik · Linux · Windows Server

EDUCATION

- **M.Sc. Computer Engineering**, Politecnico di Torino (2023–2026), 101/110 · Thesis: *Seamless Upgrades in Cloud-Native Environments*
- **B.Sc. Information Technology Engineering**, University of Applied Science and Technology, Iran (2016–2018), 19.07/20

Languages: Persian (native) · English (C1) · Italian (A2)