Mohammed Adnan Ahmed

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EDUCATION

University of Ottawa, *Ottawa* **Sept 2023 - Dec 2025**

MDTI Digital Transformation and Innovation and Concentration Applied Data Science

Sathyabama Institute of Science and Technology, *Chennai* **June 2019 - May 2023**

B.E., Computer Science and Engineering

SKILLS

Cloud and Container Platforms: OpenShift, Kubernetes, Docker, IaaS, AWS

Infrastructure Automation/DevOps: IaC Tools (Terraform, Crossplane), GitOps, Server Management, API Integration, Linux

Networking: L2/L3 Protocols, DNS, Networking Fundamentals

Programming Languages: Go, Python, SQL, Bash

WORK EXPERIENCE AND INTERNSHIPS

Nokia | ***Cloud and Automation Developer*** **Sept 2024 - Dec 2025**

- Worked on developing a custom Kubernetes controller in **Go** to automate OpenShift cluster provisioning on **BMC-based bare-metal nodes** via the Assisted Installer.
- Developed reconciliation logic for a user-defined **ClusterIntent** CRD, automating **Agent-based** OpenShift cluster provisioning on bare-metal infrastructure using the Assisted Installer architecture.
- Integrated concurrent, real-time cluster status tracking via **Go routines**, updating the **status subresource** of the ClusterIntent CR to reflect installation phases and progress across all control plane nodes.
- Developed the user-facing **ClusterIntent** API to align with GitOps workflows by leveraging **ArgoCD**-based reconciliation, enabling declarative cluster provisioning through **version-controlled** manifests and continuous drift correction.

BuyerFolio | ***Data Scientist*** **Jan 2024 - June 2024**

- Developed a **hybrid recommendation system** to match co-owners using collaborative signals from **user interaction data.**
- Optimized recommendation algorithms for **dynamic, interaction-driven** personalization using evolving user behavior patterns.
- Built scalable **data pipelines** for **automated scraping and preprocessing** of real estate listings; conducted **EDA** to derive insights on location and pricing trends.

Omdena | ***ML Engineer*** **March 2023 - May 2023**

- Developed hybrid recommendation algorithms for **PropertyAI**, an open-source platform, integrating **content-based techniques** to improve property relevance ranking.
- Built interactive **visual analytics dashboards** to support model evaluation and provide insights for real estate professionals.

Verzeo | *Machine Learning Intern* **Aug 2021 - Oct 2021**

- Built a customer satisfaction classifier by fine-tuning **BERT** on **unstructured feedback data** on restaurants.
- Performed domain-specific error analysis and **model evaluation** to extract **sentiment patterns** and satisfaction drivers.

ACADEMIC PROJECTS

DNA Home Lab Github

- Designed and Developed a cloud-native homelab platform by deploying a **Kubernetes** cluster on a **Proxmox VE** hypervisor across Lenovo ThinkCentre nodes, hosting core infrastructure services such as **VPN**, **DNS**, and **web servers** essential for the home server environment, alongside additional services utilized by my personal projects. Utilized IaC tools with **GitOps** workflows to enable fully declarative, version-controlled provisioning and lifecycle management of infrastructure and applications.

DeveloperNest Github

- A modular, **Kubernetes-native** IaaS platform that allows users to request, provision, and manage infrastructure resources—such as VMs, storage, and databases—through **declarative claims** using a web UI or **API**. Used custom **Kubernetes controllers** and **Crossplane compositions** to enable self-service infrastructure with **Terraform modules**, integrating VM creation, configuration, and teardown workflows. The core motivation was to **automate** VM provisioning through an API without manually configuring each VM, saving time and reducing errors, while providing **environment isolation.**