

Om Pandey

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CAREER SUMMARY:

Software Engineer with 3 years of experience in managing and optimising cloud-native applications on AWS using Kubernetes and Ansible. Seeking a full-time role to leverage technical expertise and contribute to innovative projects. Skilled in machine learning, with a strong foundation in algorithms and data analysis.

WORK EXPERIENCE:

Capgemini

Professional - 1 Software Engineer (L3)

July 2023 - Present

- Developed CI/CD pipeline using Gitlab CI and Jenkins to automate the merging of code into git and deploying it to a test environment for QA (Quality Assurance) testing, reducing deployment duration by 75%.
- Migrated on-premise Kubernetes environment to AWS Elastic Kubernetes Service, optimising resource utilisation and enhancing scalability by 40%.
- Implemented AWS Network Load Balancers, Security Groups, and HTTPS certificates to establish secure and efficient network connectivity between microservices which led to a 50% reduction in security vulnerability incidents.
- Leveraged Ingress controllers and AWS NLBs to manage external and internal traffic, reducing costs by over 80% through targeted optimization of Target Group Bindings.
- Accelerated edge deployment through Ansible automation, troubleshooting and resolving issues to achieve an 80% reduction in failure rates.
- Orchestrated complex Kubernetes deployments on AWS, provisioning and managing EC2 instances, VPCs, and network peering for a secure and scalable infrastructure.
- Streamlined application deployment by converting diverse Docker service packages into a unified Docker Compose file, facilitating seamless integration into our platform.

Associate - 2 Software Engineer (L2)

June 2022 - June 2023

- Successfully migrated a complex Kubernetes environment from version 1.18 to a newer, supported version, ensuring uninterrupted service and optimised performance.
- Collaborated with cross-functional teams to implement and manage multiple Kubernetes Container Networking Interfaces (CNI) solutions, including Calico, Kube-OVN, and Cilium, to optimise network topology and security.
- Reduced resource consumption by 33% through the elimination of Docker integration on Kubernetes nodes, resulting in significant cost savings.
- Spearheaded a Proof of Concept (POC) to migrate on-premise, self-managed Kubernetes clusters to AWS, evaluating the feasibility and benefits of cloud adoption.

PROJECTS:

Machine Learning using OOPS concepts

- Developed and implemented K-Means clustering and KNN classification algorithms in Python, applying foundational mathematical principles.
- Employed object-oriented programming (OOP) paradigms, including encapsulation, polymorphism, and inheritance, to create a robust and maintainable codebase for effective data analysis and model deployment.

Published Research Paper on Mushroom Classification

- Conducted a comprehensive comparative analysis of 14 Machine Learning algorithms, evaluating performance metrics such as accuracy, precision, and F1-score.
- Presented research findings at the 12th International Conference on System Modeling and Advancement in Research Trends (SMART) 2023.
- An IEEE Publication - <https://ieeexplore.ieee.org/abstract/document/10428619>

SKILLS:

Languages:	Java, GoLang, Python, C++, SQL
Containerisation:	Kubernetes, Docker, AWS EKS
Cloud:	Amazon Web Services, vSphere, Google Cloud Platform (GCP)
Automation:	Ansible, Terraform, Jenkins, GoVC

EDUCATION:

University of Petroleum and Energy Studies

June 2018 - May 2022

Bachelors in Technology - Computer Science Engineering, with **Specialization** in Artificial Intelligence and Machine Learning