

Vinod Ulli

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AI/ML & MLOps Architect

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My Skills

Category	Subcategory	Skills & Tools
Machine Learning & AI	Fundamentals	Statistics, Probability, ML Algorithms, Feature Engineering, Model Evaluation, Hyperparameter Tuning, Time Series Analysis, Transformers, NLP, Deep Learning
	Cloud AI Services	Azure ML, Azure OpenAI, Cognitive Services, Datafactory, Azure Databricks, Azure AI Search, SageMaker, Bedrock, Comprehend, Rekognition, Textract, AWS Inferentia
MLOps & LLMOps	Model Lifecycle	MLflow, DVC, Dagshub, Airflow, Kubeflow, Model Versioning, Automated Pipelines
Generative AI & LLMs	LLM Workflows	Fine-tuning LLMs, LangChain, LangGraph, Custom Chatbots, RAG, Hugging Face, Lamini
	Vector Search	Pinecone, FAISS, DynamoDB, Azure Cosmos DB
AI Agents & Automation	Agentic Frameworks	OpenAI Agents SDK, CrewAI, LangGraph, MCP, Agentic Workflows, N8N
Cloud Platforms	Azure	VNet, AKS, Virtual Machines, Azure Monitor, WebApp, FunctionApp, App Service Plan, Network Security Groups, Load Balancer, Application Gateway, Azure Container Registry, Blob Storage, Data Lake Gen2, Cosmos DB, Azure SQL, Synapse Analytics
	AWS	VPC, EKS, ECS, EC2, Lambda, AWS Batch, Fargate, Route53, IAM, S3, RDS, DynamoDB, SageMaker, Bedrock, AWS Inferentia, CloudWatch, CloudTrail, AWS Config, GuardDuty, Secrets Manager, CodePipeline, CodeBuild, CodeDeploy, CloudFormation, AWS CLI
Infrastructure as Code	IaC Tools	Terraform, ARM Templates
DevOps & CI/CD	CI/CD & Automation	Azure DevOps, AWS DevOps, Jenkins, GitLab CI, GitHub Actions, Argo CD
	Config & Orchestration	Ansible, Puppet, Docker, Kubernetes, Helm Charts
Programming & Libraries	Python Ecosystem	Core Python, Advanced Python, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, TensorFlow, Keras, OpenCV
	Scripting	Shell Scripting
Monitoring Tools	Observability	Grafana, Prometheus, Azure Monitor
Developer Platforms	IDEs & Utilities	Jupyter, VSCode, PyCharm, Maven, HashiCorp Vault

How can i contribute to the Organization Goal?

With **15+ years** of hands-on experience in AI/ML, MLOps, DevOps, IaaC engineering, and Cloud platforms, I specialize in delivering the following solutions:

Leadership and Solution Architecture: I have good experience in Team managing, guiding the team members and taking the responsibility to end to end project implementation, Architecture creation for projects

Machine Learning & Deep Learning: Build end-to-end machine learning projects using supervised and unsupervised algorithms. Develop deep learning solutions with full lifecycle integration.

MLOps: Containerize ML models and deploy them to Kubernetes environments such as AKS or EKS. Set up robust MLOps pipelines for both ML and deep learning projects. Automate model training, validation, deployment, and monitoring. Integrate CI/CD workflows to streamline experimentation and production rollout.

Generative AI & LLMs: Design and develop RAG-based chatbots using large language models (LLMs). Fine-tune LLMs with organization-specific documents to enhance contextual performance.

LLMops: Implement LLMops workflows to manage the lifecycle of large language models. Automate fine-tuning, deployment, and monitoring of LLMs in production environments.

Agentic AI Workflows: Worked Agentic AI frameworks and built intelligent agent workflows using frameworks like CrewAI and MCP. Created Workflows using N8N

DevOps & CI/CD: Create end-to-end CI/CD pipelines integrating code quality checks, vulnerability analysis tools, and automated deployment. Productionize applications on Azure and AWS with full DevOps integration.

Infrastructure as Code (IaC): Write and manage Infrastructure as Code using Terraform for both AWS and Azure environments.

My Experience:

British Petroleum (Innovation & Engineering)

Duration: July 2022 – Present

Designation: Senior AI Platform Architect

Role: AI/ML MLOps Platform Architect

Responsibilities:

- Automated complex business and engineering workflows using **Agentic AI frameworks** (LangChain, CrewAI, LangGraph, OpenAI Agents SDK) and **Python**
- Deployed scalable AI solutions via **Kubernetes** and **Docker**, ensuring robust containerized infrastructure
- Designed and implemented **GenAI-powered chatbots** with **LLMs** and **RAG** techniques, integrated into **Azure Cloud** and **Azure Storage** for secure enterprise-grade use
- Built reusable Agentic AI modules for project onboarding, knowledge automation, and self-service workflows using Vector Databases for efficient retrieval
- Integrated GenAI solutions with **enterprise systems** and **WebApps**, enabling intelligent automation and seamless user experiences
- Collaborated with cross-functional teams to identify automation opportunities and deliver **production-ready AI solutions** using LangChain, LangGraph, and Azure services
- Documented **best practices** for Agentic AI workflows, GenAI chatbot development, and cloud deployment to accelerate team-wide adoption and knowledge sharing

Yaari Digital Integrated Services

Duration: Jan 2022 - July 2022

Designation: Engineering Manager

Role: Data Scientist

Responsibilities:

- Collected, cleaned, and analyzed **large-scale e-commerce datasets** using **Python**, **Pandas**, and **NumPy** to extract actionable insights
- Built and validated **ML models** for customer segmentation, recommendation systems, and sales forecasting using **Scikit-Learn** and **TensorFlow**
- Deployed models to **Azure** and **AWS** using **MLflow**, **CodeCommit**, **CodeBuild**, and **CodeDeploy**, enabling scalable and reliable production inference
- Engineered and automated **data pipelines** and model deployment workflows to streamline end-to-end ML operations
- Embedded **predictive analytics** into business workflows by collaborating with cross-functional teams to define data requirements and interpret model output

UBS Business Solutions

Duration: Dec 2019 – Dec 2021

Designation: Associate Director

Role: Data Scientist/Machine Learning

Responsibilities:

- Developed and deployed **ML models** for credit risk assessment, customer segmentation, and fraud detection using **Python, SQL, and MLflow**
- Built and orchestrated **scalable data pipelines** for ingesting, cleaning, and transforming large volumes of transactional data using **Airflow and Dagshub**
- Automated **model lifecycle management** (deployment, versioning, monitoring) using **Azure DevOps and MLflow**, ensuring reproducibility and regulatory compliance
- Applied **Explainable AI techniques** (SHAP, LIME) to enhance model transparency for business and regulatory stakeholders
- Created **interactive dashboards** and reports using **Power BI** and **Streamlit** to visualize model outputs and business KPIs
- Containerized models with **Docker** and deployed to **Azure Kubernetes Service (AKS)** and Kubernetes clusters for real-time inference using best DevOps practices

Nice Interactive Business Solutions

Duration: Jan 2019 - Nov 2019

Designation: Specialist Software Engineer

Role: Machine Learning & MLOps Engineer

Responsibilities:

- Led **end-to-end development** of a machine learning system for detecting suspicious transactions and preventing financial fraud in compliance with banking regulations
- Conducted **exploratory data analysis (EDA)** on large-scale transactional and customer datasets using **Python** and **Power BI**
- Engineered advanced features including transaction frequency, deviation analysis, customer risk scores, and geolocation anomalies
- Built and evaluated multiple ML models for anomaly detection and risk scoring, including **Random Forest**, **XGBoost**, and **LSTM**
- Applied **Explainable AI techniques** (SHAP, LIME) to ensure model transparency and support regulatory audits
- Deployed models as REST APIs in Docker containers on Kubernetes, enabling real-time fraud detection and alerting

HCLTech (Deutsche Bank)

Duration: July 2017 - Jan 2019

Designation: Lead Consultant

Role: MLOps & Machine Learning Engineer

Responsibilities:

- Designed, implemented, and maintained **CI/CD pipelines** using **Azure DevOps** and **Python** for seamless deployment of applications and ML projects to **Azure Kubernetes Service (AKS)**
- Automated infrastructure provisioning and management on **Azure** using **Terraform**, **Kubernetes**, and **Docker**, following **Infrastructure-as-Code (IaC)** best practices
- Operationalized ML models with **MLflow**, **Docker**, and **Kubernetes**, collaborating with data science teams to ensure scalable and reproducible deployments
- Integrated **security and compliance checks** into CI/CD workflows using **Azure DevOps** and **Linux scripting**, ensuring enterprise-grade governance
- Monitored, troubleshooted, and optimized **Azure cloud resources** and deployments for **performance tuning** and **cost efficiency**

Capgemini (HSBC Bank)

Duration: Apr 2016 - July 2017

Designation: Consultant

Role: MLOps & IaaC Engineer

Responsibilities:

- Designed, developed, and maintained **CI/CD pipelines** using **Jenkins**, **Python**, and **Git** to automate build, test, and deployment workflows
- Took care of **End to End ML pipelines** training and retraining ML models
- Implemented **Infrastructure-as-Code (IaC)** using **Terraform** and **Docker** to provision and manage secure cloud infrastructure on Linux environments

- Collaborated with development and operations teams to integrate **automated testing, security scanning, and compliance checks** into CI/CD pipelines
- Optimized **deployment strategies** with **Docker** and **Terraform** to support high availability, resilience, and disaster recovery

Infosys (Apple)

Duration: Sep 2014 - Apr 2016

Designation: Technology Analyst

Role: ML Engg & MLOps Mgmt.

Responsibilities:

- Automated **application deployments** across **Linux, AIX, and Solaris** environments using Jenkins and Shell scripting
- Managed **server provisioning and configuration** for Apple cloud environments using Ansible and Python
- Build ML models using ML and DL algorithms and deploying pkl files via pipelines to AKS
- Developed and maintained **Ansible playbooks** and **Shell scripts** for server setup, application configuration, and patch management
- Integrated **CI/CD best practices** across heterogeneous platforms by collaborating with cross-functional teams using **Jenkins** and **Python**

IBM (Hilton Worldwide Hotels)

Duration: Jan 2011 - Sep 2014

Designation: Unix/Python Developer

Role: Unix/Python Developer & Admin

Responsibilities:

- Administered and maintained **Unix-based servers** (Linux and Solaris) to ensure **high availability, security, and optimal performance** Automating tasks using Python and Shell Scripts
- Performed **system installations, upgrades, patch management**, and routine maintenance to support stable infrastructure
- Automated **system administration tasks** using **Shell scripting**, reducing manual effort and minimizing errors
- Deployed, configured, and managed **application servers** including **Apache Tomcat** and **IBM WebSphere** for enterprise workloads
- Monitored **system health**, analyzed logs, and resolved incidents to minimize downtime and ensure continuous service delivery

Education

Bachelor of Engineering(E&C): Saptagiri College of Engineering, Bangalore, Visvesvaraya Technological University, Belgaum - Karnataka 61.21% - 2010

Diploma(E&C): Govt Polytechnic Vijayapura, Karnataka Department of Technological University Karnataka 72% - 2007