# Harsha Masandrapalya Vanarajaiah

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## Education

**George Mason University,** Fairfax, VA                                **Aug 2022 - May 2024**
Master of Science, Computer Science                                **GPA: 3.92 / 4.0**

## Technical Skills

**Programming Languages**: Python, C, JavaScript, Java, Typescript.
**Web Technologies**: HTML, CSS, React, Redux, NextJs, Tailwind, Sass, Node.js, Express.js, Flask, REST APIs, Swagger.
**Databases**: MySQL, PostgreSQL, MongoDB, DynamoDB, Cosmos DB, Cloud Datastore. **Version Control**: Git.
**Cloud Platforms**: AWS (EC2, S3, Lambda, IAM, VPC, EKS, ECS, RDS, CodeBuild, CloudFormation), Azure (AKS, VMs, Azure Functions, Azure DevOps, Key Vault, APIM, Vnet, ARM Template, Azure OpenAI, AI search, NetApp), GCP (GKE, Cloud Functions, Pub/Sub, Cloud Storage, BigQuery, Cloud Build).
**Monitoring & Security**: Prometheus, Grafana, KEDA, CloudWatch, Azure Monitor, Nessus, Nagios, Vault.
**DevOps & Infrastructure Tools**: Terraform, Docker, Kubernetes, Helm, Ansible, Jenkins, GitHub Actions, Argo CD, Redis.

## Certifications

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| **Certified Kubernetes Application Developer (CKAD)**, The Linux Foundation | **Apr 2025** |
| **Microsoft Certified: Azure Administrator Associate**, Microsoft | **Feb 2025** |
| **Terraform Associate (003)**, HashiCorp Cloud Engineer Certification | **Dec 2024** |

## Experience

**Microstrategy**                                **Tysons, VA**
**Software Engineer**                                **Oct 2024 – Present**
- Orchestrated multi-cloud deployment for 5,000+ users on AWS, Azure, and GCP using cloud-agnostic tools like **Terraform** and **Kubernetes**; achieved 99.99% uptime, streamlined AI analytics, scalable infrastructure with zero-downtime rollouts.
- Architected cloud infrastructure with automatic failover and **DR** using Terraform, **ECS** ensuring uninterrupted operations.
- Engineered **Prometheus and KEDA**-driven autoscaling for Kubernetes services, visualizing pod performance metrics like CPU and memory via **Grafana** dashboards; improved resource utilization and reduced peak-time latency by 35%.
- Utilized AWS services (**Lambda, CloudFormation, CodeBuild, S3**) and Azure services (**AKS, Azure Functions, Logic Apps, Container app jobs**) to architect serverless workflows, enhancing efficiency and resource utilization.
- Led the migration from Azure NFS **File Share** to Azure **NetApp** Files for AKS, resolving critical DR and geo-redundancy gaps, enabling snapshot-based backups, Terraform-managed provisioning, and boosting I/O throughput by 25%.
- Directed scrum meetings, mentored juniors & reviewed source code, reduced timeline by 10% and led to early launch.

**Associate Software Engineer**                                **Jun 2024 – Oct 2024**
- Built serverless cleanup pipelines to reclaim unused resources daily, driving $1M+ in annual savings across AWS and Azure.
- Enhanced **RAG** capabilities with **Azure AI Search**, embeddings, and function apps, boosting analytics accuracy by 72%.
- Designed and implemented scalable AI-powered cloud architectures, processing over 50 million TPM and supporting 500K+ concurrent API requests, leveraging **Azure OpenAI, APIM** across US, EU regions to power analytics bots.
- Automated image builds via **Packer**, integrated into CI pipelines with Nessus scanning, ensuring hardened deployments.

**Accenture**                                **Bengaluru, India**
**Software Engineer**                                **Aug 2020 – Jul 2022**
- Built and containerized full-stack services with **Docker**, deployed on Kubernetes, enabling autoscaling and resilient rollouts.
- Architected modular **Helm charts** for **Kubernetes** applications to streamline deployment and configuration management.
- Authored 50+ **Ansible roles/playbooks** and refactored 80% of existing ones to ensure compliance and standardization.
- Provisioned **AWS EC2** infrastructure with volumes, auto-scaling, load balancers, Route 53, and SNS based on architecture.
- Optimized the build pipeline using **Jenkins CI**, **Apache Maven** reducing manual effort by 80% and accelerating delivery.

## Projects

**RapidCloudify** | Python, Ansible, AWS(EC2, S3, Lambda), NextJs, Flask, Nginx, Redis                                **May 2024**
- Spearheaded development of a **no-code deployment** platform using **Next.js, Flask, and Ansible**, enabling deployment of 20+ tech stacks including **React, Node.js, and Python** on **AWS**, eliminating 70% of repetitive tasks
- Orchestrated streamlined CI/CD system implementation, utilizing **Webhooks** for swift and automatic deployment, resulting in a 40% reduction in deployment time, **eliminating** reliance on Jenkins.
- Automated provisioning of AWS services Load Balancers, S3, and EC2 with IaC using **Ansible**, cutting setup time by 60%.
- Integrated **Redis queueing** and **async jobs** for parallel deployments, improving throughput and reducing latency at scale.

**University Department website** | React, Node.js, OAuth, JWT, Kubernetes, Amazon EC2, Jenkins                                **Nov 2023**
- Developed student survey app with user/admin roles, secured using **JWT**, **OAuth**, enabling RBAC with protected APIs.
- Leveraged **Rancher** with **Kubernetes** for app deployment, and monitoring, improving operational efficiency and Deployed **Dockerized** components across multiple **AWS EC2** instances, enhancing application scalability.
- Engineered **Jenkins CI/CD** pipeline that automated build, deployment processes, reducing deployment time by 50% .