

# Harshith Kethavath

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## EDUCATION

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### The University of Georgia

Athens, GA

*Master of Science in Computer Science, GPA: 4.0/4.0*

*Aug 2024 – May 2026*

- **Coursework:** Computer Networks, Software Engineering, Algorithms, Database Management, Operating Systems, and Advanced Data Intensive Computing

### Indian Institute of Technology Bhubaneswar

Bhubaneswar, India

*Bachelor of Technology in Electrical Engineering*

*Jul 2019 – May 2023*

## WORK EXPERIENCE

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### UGA Edge/Cloud Research Lab

Athens, Georgia

*Research Assistant, **Director:** Dr. In Kee Kim*

*Oct 2024 – Present*

- Developed and deployed a suite of Computer Vision scripts, and a Recommendation Model, onto Jetson Orin Nano, generating a 7 million point dataset to benchmark throughput against thermal stress.
- Discovered critical performance degradation across models when GPU temperatures reached the 60 to 70°C range under full load, including a 36% drop in recommendation system at 75°C.

### HCLTech

Pune, India

*Cloud Engineer, **Client:** Amazon Lab126*

*Oct 2023 – Jun 2024*

- Automated HPC cluster provisioning using SOCA template, saving 80 manual configuration hours. Resolved over 120 client tickets related to cluster access, job submission, and queue management.
- Engineered and documented reusable POCs for large-scale systems, contributing to strategic decisions, and helped reducing new hire onboarding time by 75%.

### Bhaktivedanta Institute

Remote

*Web Development Intern*

*May 2022 – Jul 2022*

- Developed 6 new responsive front-end pages and refactored main CSS file to reduce code duplication by 27%.
- Coordinated with back-end developers to integrate APIs seamlessly into front-end, performed regular testing, resolved over 30 bugs and updated website content, increasing user engagement by 15%.

## PROJECTS

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### Creo on Amazon AppStream 2.0:

- Designed a solution with SSO access, by integrating IAM with Azure AD, provisioning AppStream desktops, and implementing FSLogix with FSx to enable a scalable user cache of up to 3TB, replacing the 1GB default.
- Implemented automation for provisioning, configuration, and deployment of resources using Terraform for IaC, reducing deployment time by 20%.

### 3-Tier Web Application:

- Built a 3-tier web architecture on AWS for a student club, using an auto-scaling web tier, and an Application Tier with a secure backend and Bastion host, and Amazon RDS for MySQL for secure inventory management.
- Configured VPC, subnets, route tables, and security groups to enhance security and traffic segregation. Used auto-scaling groups for EC2 and an ALB to optimize costs by 25% while ensuring high availability.

### Serverless Sending Application:

- Built a web-based solution enabling users to send emails and SMS via Amazon SES and SNS, integrated with API Gateway and AWS Lambda for processing requests, to achieve an average response time of 300 ms.
- Orchestrated workflows using AWS Step Functions and Amazon S3, resulting in a secure, serverless, event-driven infrastructure with a pay per use model that eliminated all idle infrastructure costs.

## SKILLS

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**Languages:** Python, C, C++, and Java

**Data Science:** SQL, Numpy, Pandas, Matplotlib, and PyTorch

**Infrastructure Engineering:** AWS, IAM, EC2, VPC, S3, RDS, FSx, Lambda, Terraform, Git, and Linux

**Certifications:** AWS Certified Cloud Practitioner