RIDHAM PANSARA

M.Eng. Student | Cloud & DevOps Engineering | Seeking Master's Thesis / Internship
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PROFILE

Master's student in Computer Engineering for IoT Systems with hands-on experience in AWS cloud infrastructure, Terraform, Docker, Linux, and CI/CD automation. Designed and deployed a production-inspired FastAPI application on AWS ECS Fargate with RDS PostgreSQL, reusable Terraform modules, secure GitHub Actions OIDC authentication, automated database migrations, HTTPS, monitoring, and deployment reliability controls. Seeking a master's thesis in Cloud Computing, DevOps, Platform Engineering, SRE, Cloud Infrastructure, or Cloud Security; also open to internship and working-student opportunities.

SKILLS

Cloud & AWS: ECS Fargate, RDS, ECR, Application Load Balancer, EC2, S3, CloudFront, Route 53, IAM, VPC, CloudWatch, Secrets Manager, ACM; Azure and GCP fundamentals

DevOps & CI/CD: GitHub Actions, GitLab CI/CD, AWS OIDC, Jenkins, Git, automated deployments, smoke testing

Containers & Infrastructure as Code: Docker, Docker Compose, Amazon ECS, Kubernetes, Helm, Terraform, reusable modules, S3 remote state

Backend & Databases: Python, FastAPI, REST APIs, PostgreSQL, SQLAlchemy, Alembic, OpenAPI/Swagger

Cloud Security & Reliability: IAM role separation, Security Groups, TLS/HTTPS, private RDS, non-root containers, health/readiness checks, CloudWatch alarms, rollback controls

Linux & Networking: Linux, Bash, SSH, DNS, HTTP/HTTPS, TCP/IP, VPC networking, load balancing

Testing & Quality: Pytest, Ruff, FastAPI TestClient, linting, formatting, Docker build validation

Programming: Python, Bash, Java, Node.js, C/C++

Professional Skills: Technical documentation, problem solving, teamwork, communication, analytical thinking, continuous learning

Languages: English (Fluent), German (A2–B1)

EDUCATION

M.Eng. in Computer Engineering for IoT Systems — **2022 – Present**
Nordhausen University of Applied Sciences, Germany

B.Eng. in Computer Engineering — **2017 – 2022**
Gujarat Technical University, India

PROJECTS & PRACTICAL EXPERIENCE

Cloud-Native Task Manager on AWS

GitHub Repo - 2026

Independent Cloud & DevOps Project

- **Provisioned** a containerized FastAPI application on AWS ECS Fargate using six reusable Terraform modules for networking, security, RDS PostgreSQL, ALB, ECS, and monitoring.
- **Built** secure GitHub Actions CI/CD with AWS OIDC, immutable Docker image tags, automated Alembic migrations, ECS deployment, stability checks, and HTTPS smoke testing.
- **Implemented** private RDS access, Secrets Manager, IAM role separation, security-group isolation, non-root containers, CloudWatch alarms, health checks, rollback controls, and cost-aware runtime automation.

Cloud Portfolio — AWS S3 + CloudFront (Production Live)

GitLab Repo - 2026

Cloud DevOps & CI/CD Project

- **Deployed** a production static portfolio website using Amazon S3, CloudFront, Route 53, and HTTPS with a custom domain.
- **Built** a five-stage GitLab CI/CD pipeline covering validation, quality checks, application build, S3 synchronization, and CloudFront cache invalidation across 95 repository commits.
- **Implemented** monitoring and rollback support, ensuring reliable and repeatable production deployments.

GitLab CI/CD Build-Test-Deploy Pipeline

GitLab Repo - 2025 – 2026

Course Project

- **Created** a GitLab CI/CD pipeline for a Node.js/Vite application, automating dependency installation, build, testing, linting, and artifact generation across 186 repository commits.
- **Executed** pipeline jobs in Docker-based runners and managed deployment credentials through GitLab CI/CD variables.

- **Implemented** deployment workflows for Netlify, Amazon S3, and EC2, using SSH and SCP for the EC2 deployment process.

Docker Essentials — Containerized Application Workflow

Docker Hub - 2025

Course Project

- **Containerized** a Python application with Docker and optimized image layers to produce a 37.59 MB compressed image.
- **Built** a linux/amd64 image and published it to Docker Hub, completing the workflow from Dockerfile creation to registry distribution.

IoT Sensor Prototype — STM32 + LoRa + BME680

GitHub Repo - 2024

Academic Project · Nordhausen University of Applied Sciences

- **Developed** an STM32 NUCLEO-G071RB prototype and integrated a BME680 sensor through I2C and SPI to collect temperature, humidity, pressure, and gas measurements.
- **Integrated** an SX1262 LoRa HAT for long-range data transmission and implemented UART-based CLI commands for automatic and manual sensor readouts.

Network Performance Benchmarking — eBPF/XDP

GitHub Repo - 2023

Academic Project · Nordhausen University of Applied Sciences

- **Evaluated** router throughput and latency using eBPF/XDP concepts and automated measurement collection and analysis with Python and shell scripts across 59 repository commits.

CERTIFICATES & TRAINING

- AWS Cloud Practitioner Essentials — AWS Training & Certification (Jan 2026)
- GitLab CI/CD: Pipelines, CI/CD and DevOps for Beginners — Udemy (Jun 2026)
- Docker Essentials: A Developer Introduction — IBM / Cognitive Class (Jun 2026)
- Introduction to Git and GitHub — Google / Coursera (Jan 2026)
- Bash Scripting and Shell Programming — Udemy (Dec 2025)
- Linux Basics: The Command Line Interface — Coursera, Dartmouth & IMT (Nov 2025)