

CONTACTS

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Portfolio: [engineering-portfolio](#)

Bhubaneswar, Odisha, India

TECHNICAL SKILLS

AI / ML / GenAI

Python, LangChain, LLMs, RAG, AI Agents, HuggingFace Transformers, PyTorch, Scikit-learn, MLflow, Vector Search, Text Embeddings, OpenAI Models, Garak

Data Engineering

Azure Databricks, PySpark, Azure Data Factory, Azure Storage, ADLS, ETL/ELT, Data Ingestion, Data Transformation, SQL

MLOps / DevOps

Docker, Kubernetes (AKS), Azure DevOps Pipelines, GitHub Actions, CI/CD, Automated Testing, Static Analysis, ARM Templates, Azure CLI

Cloud (Azure)

Azure ML, Azure AI Search, Azure Functions, Azure Container Instances, Azure Container Registry, Azure Web Apps, Azure Monitor, Azure AD

Backend / APIs

FastAPI, REST APIs, Linux, Bash, Git, Postman, VS Code

Mathematics

Linear Algebra, Multivariable Calculus, Probability & Statistics, Optimization Theory

Security

Cybersecurity Fundamentals, OWASP, AI/LLM Security, Prompt Injection Defense, Azure Security Center

EDUCATION

Silicon University

Bachelor of Technology (B.Tech) — Computer Science and Engineering
Sep 2024 | Bhubaneswar, Odisha

Relevant Coursework

Linear Algebra, Calculus, Probability & Statistics, Data Structures, Computer Networks, Cloud Computing, Machine Learning and AI

CERTIFICATIONS & LEARNING

- Kaggle — Intro to Machine Learning | Completed May 2026
- Kaggle — Intermediate Machine Learning | Completed May 2026
- fast.ai — Practical Deep Learning for Coders | Completed
- HuggingFace NLP Course | Completed
- Microsoft Certified: Azure AI Engineer Associate (AI-102) | In Progress — Target: Month 6
- AWS Certified Machine Learning — Specialty | In Progress — Target: Month 9
- Microsoft Certified: Azure Administrator (AZ-104) | In Progress

DSA Practice: 150+ LeetCode problems · 150+ Striver DSA problems

VISHAL TRIPATHY

AI Engineer · Azure Data Engineer · ML Engineer

PROFESSIONAL SUMMARY

AI Engineer and Azure Data Engineer at Tata Consultancy Services with 2 years of experience building production AI systems, Azure data pipelines, ETL workflows, CI/CD automation, and backend APIs in the BFSI domain. Built and deployed a document-aware RAG knowledge assistant that reduced document lookup time from 15 minutes to 30 seconds and reached 90% daily adoption across 4 teams (45 of 50 engineers). Recognized by peers as an automation expert for production-ready solutions adopted across multiple projects. Strong in Python, SQL, Azure Databricks, PySpark, Azure Data Factory, LangChain, FastAPI, LLMs, and Retrieval-Augmented Generation.

PROFESSIONAL EXPERIENCE

AI Engineer / Azure Data Engineer

Tata Consultancy Services (TCS) · CIBC — CCDWM | BFSI · Bhubaneswar, Odisha

September 2024 – Present

- Built and deployed a document-aware RAG knowledge assistant using Python, FastAPI, LangChain, Azure AI Search, text-embedding-3-large, Docker, Kubernetes, and Azure Functions — reducing document lookup time from 15 minutes to 30 seconds and achieving 90% daily adoption across 4 teams (45 of 50 engineers).
- Achieved ~90% retrieval accuracy in internal evaluation through conversational summarization and selective context retention, significantly reducing hallucination and unnecessary context injection.
- Built 12 production-ready Azure Databricks notebooks in Python, SQL, and PySpark for data ingestion, ETL, QA validation, ML preprocessing, and deployment checks — standardizing reusable workflows across 4 teams and reducing engineer onboarding time from 2 weeks to 3 days (reused by ~40 engineers).
- Engineered Azure Data Factory pipelines for data movement, workflow orchestration, transformation, and validation — reducing pipeline maintenance effort by ~70% across 3 projects.
- Built Azure DevOps CI/CD pipelines with automated testing, linting, static analysis, Docker builds, artifact publishing, environment promotion, and rollback — cutting deployment effort from ~1 hour to 10 minutes across 5 projects used by 30 engineers.
- Streamlined QA regression testing with Python and Bash, saving ~4 hours per release across 3 projects and eliminating manual testing effort for ~20 QA engineers.
- Orchestrated Azure environment provisioning using ARM Templates and Azure CLI, reducing setup time from 2 days to 2 hours across multiple projects.
- Developed Linux and Bash scripts for Azure-Linux connectivity, log collection, and service management — saving ~30 minutes per engineer per day across ~25 engineers.
- Systematized routine cloud operations via Python scripts and Azure CLI, cutting manual provisioning time by 50% across production environments.

SELECTED PROJECTS

RAG Agent

Python · FastAPI · LangChain · Azure AI Search · OpenAI · Docker · Kubernetes · Azure Functions

[Live Deployment Link](#) | [GitHub Source Code Link](#)

- Built and deployed a document-aware RAG agent capable of ingesting PDF, DOCX, TXT, and CSV documents, retrieving relevant context through vector search, and generating grounded answers using LLMs.
- Implemented conversational summarization and selective context retention to reduce hallucination and unnecessary context while improving response reliability.
- Achieved approximately 90% retrieval accuracy in internal evaluation and approximately 90% daily adoption across 4 teams, reducing document lookup time from 15 minutes to 30 seconds.

Engineering Portfolio

Next.js · TypeScript · React · Tailwind CSS · Vercel · GitHub

[Live Deployment Link](#) | [GitHub Source Code Link](#)

- Designed and deployed a production-oriented engineering portfolio with a dynamic architecture for showcasing verified engineering work.
- Implemented a recruiter-focused interface for professional experience, skills, projects, and career information; deployed publicly on Vercel with source hosted in GitHub.

Self-Hosted GitHub README Stats Platform

Docker · Docker Compose · Nginx · Linux · HTTPS · GitHub Actions CI/CD

[Live Deployment Link](#) | [GitHub Source Code Link](#)

- Built and deployed a self-hosted GitHub README Stats platform with Docker Compose, Nginx reverse proxy, HTTPS, and GitHub Actions CI/CD.
- Configured Linux hosting, service routing, environment configuration, container operations, and deployment automation for a publicly accessible production service.