

Dhawal Gajwe

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SUMMARY

Senior AI/ML Software Engineer with 6+ years of experience spanning cybersecurity and AI/ML systems. Expertise in Python-based production pipelines, deploying scalable services on Kubernetes with Docker and CI/CD automation. Delivered LLM-powered automation platforms and NLP-driven claims adjudication solutions, translating complex requirements into compliant, high-performing products.

EXPERIENCE

AVSI Systems LLC

Jun 2026 - Present

AI Engineer

Portsmouth, NH

- Built a **serverless RAG chatbot admin platform on AWS** (API Gateway, Lambda, ECS Fargate, SQS, S3, OpenSearch) with a JWT-secured CloudFront + S3 admin UI. Enables administrators to deploy and update chatbots across environments in minutes.
- Owned deployments and major changes to a **Terraform IaC stack** of 80+ AWS resources (VPC, IAM, KMS, Lambda, ECS, SQS, API Gateway, WAF, CloudWatch, Secrets Manager) — maintaining environment parity across dev/staging/prod and shipping infrastructure changes alongside application releases.
- Designed a TypeScript/Fastify admin API with 60+ endpoints for **multi-tenant management of applications, chatbots, environments, RBAC, and knowledge bases**, using pluggable Postgres/SQLite adapters; this streamlined tenant onboarding and reduced API maintenance effort

WEX

Aug 2025 - Feb 2026

AI/ML/NLP Engineer

Chicago, IL

- Designed and scaled an **AI-driven claims auto-adjudication** system using **LangGraph**, OpenAI LLMs, and **OCR** pipelines, enabling **40% of insurance claims** to be reimbursed automatically without manual intervention and deploying inference endpoints with FastAPI for real-time decisioning.
- Built **end-to-end NLP pipelines** to extract, normalize, and validate structured data from unstructured claim documents, improving extraction accuracy and downstream decision reliability and integrating MLOps practices for automated testing and monitoring.
- Performed data analysis and clustering on historical claims to identify high-confidence adjudication **patterns**, expanding automated coverage by an additional 2% and deploying models in AzureML for scalable model deployment.

McAfee

Aug 2019 - Aug 2024

Software Engineer

- Led the design of **App Control Plugin** features using **OSQuery** and **Auditd**, enhancing endpoint threat detection and improving system-wide security coverage across Linux/Unix environments.
- Implemented **CI/CD pipelines** and **automation** with Jenkins and Groovy Scripts, reducing manual testing efforts by 40% and accelerating release cycles for faster software delivery.
- Developed scalable **Kubernetes containerized applications** for security using Docker, standardizing deployments and reducing operational errors by 30% across hybrid environments.
- Strengthened system compliance through CIS security hardening using Python, Lua, and C++, improving compliance scores by 25%

IBM

Jun 2018 - Jul 2018

Software Engineering Intern

- Built a web-based CMDB interface using **Node.js**, **Python**, and **MongoDB** to visualize dynamic configuration data and improve usability for system admins across enterprise IT operations.
- Boosted data retrieval speeds by 25% through strategic schema optimization, implementing efficient indexing and optimized query strategies in MongoDB for faster analytics performance.
- Automated database maintenance tasks with Python scripts, reducing downtime risk, cutting manual overhead by 30%, and improving system reliability

EDUCATION

University of Arizona

Aug 2023 - May 2025

Master of Science, Information Science - Major in Machine Learning

Tucson, AZ

National Institute of Technology Karnataka

Aug 2017 - May 2019

Master of Technology, Computer Science Engineering

India

PROJECTS

Digirestro Voice AI Agent Client Project

- Deployed the application on Azure with Azure AI Foundry resources, an orders and conversation-history database, dynamic per-restaurant agent configuration, menu-refresh and date/time tools, and per-model cost analytics.
- Built a production voice AI ordering and reservation agent end to end for Digirestro, a restaurant POS startup, integrating phone-based orders directly with the kitchen POS and provisioning a dedicated agent and menu for each newly onboarded restaurant.
- Evaluated Azure Voice Live, Infobip, and Vapi; migrated to Vapi for managed agent orchestration and implemented real-time audio frame pacing to solve barge-in, reducing interruption latency from 1–3 seconds to under 100ms.

Buddhist Comics App Buddhist Comics App

- Built an end-to-end **multimodal AI content pipeline** (async Python + OpenAI + KIE.ai + Higgsfield + edge-TTS + MoviePy) that turns a 423-verse text corpus into illustrated comic panels and short-form video reels, with a character-bible system for visual consistency across stateless diffusion models.
- Shipped a **React Native (Expo, TypeScript) iOS app**, live on the Apple App Store served by AWS Lambda + API Gateway + S3 (SAM) with on-device offline fallback.
- **Automated the marketing loop** with the Claude Agent SDK, custom skills + Playwright MCP browser automation to generate reels, Instagram captions, and YouTube metadata from each verse's story.

PubMedCentral RAG System PubMedCentral RAG System

- Built a RAG system with **LangChain – ReAct** over 18K+ PubMed articles, using chunking, embedding, and Weaviate for retrieval.
- Designed an intuitive Streamlit UI for querying biomedical literature in real time.

Transformer-Based Machine Translation Transformer-Based Machine Translation

- Implemented a Transformer model from scratch in **PyTorch** for English-Italian translation using the opus_books dataset.
- Built custom multi-head attention, positional encodings, and training loop.

TECHNICAL SKILLS

- **Languages:** Python, C/C++, SQL/NoSQL, JavaScript, HTML/CSS, R, Node, React
- **Frameworks:** Node.js, Jenkins, OSquery, Pandas, NumPy, PyTorch, FastAPI
- **Developer Tools:** Git, Docker, Kubernetes, VS Code, Visual Studio, PyCharm, Claude Code, Github Copilot
- **Libraries:** pandas, pytorch, NumPy, Matplotlib, ggplot
- **MLOps & Deployment:** MLOps, Model Deployment, AzureML