Tejaanshu Khardekar

LLM Engineer | NLP Specialist | Secure API Systems

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Experienced AI/ML engineer with 20+ years in tech, blending NLP, LLMs, API development, and secure infrastructure. Skilled in developing domain-specific LLMs, real-time AI agents, and intelligent documentation systems. Proven track record across EdTech, FinTech, and enterprise automation, with deep expertise in transformer models, search infrastructure, and Python-based tooling. Passionate about building intelligent systems that bridge human-computer interaction and scale AI safely and securely.

Principal Engineer / LLM Engineer
DAF Studios Pvt. Ltd. · Full-time
Jun 2023 – Present · Remote
DAF Studios is an AI company creating immersive, AI-driven educational experiences.

- Led the development of a proprietary domain-specific LLM optimized for education and retrieval-augmented generation (RAG).
- Developed and deployed three AI agents for summarization, contextual Q&A, and personalized curriculum generation.
- Built NLP pipelines for data preprocessing, fine-tuning, and real-time inference at scale.
- Architected vector search infrastructure using custom embeddings and Elasticsearch/OpenSearch.
- Designed CI/CD pipelines for ML workflows, ensuring reproducibility and versioning of datasets and models.
- Applied transformers and low-rank adaptation techniques to optimize model performance for limited-resource environments.
- Implemented secure model hosting and inference APIs with audit trails and role-based access.

Technical Consultant – LLMs, NLP, API Systems, Security
Linedata Services, XebiaLabs (Digital.ai), ThinkOwl · Full-time
Oct 2013 – Jun 2023

- Designed custom NLP and GenAI pipelines to generate documentation, summaries, and interactive walkthroughs for complex financial and DevOps platforms.
- Created AI-powered internal knowledge assistants with embedding-based search across Confluence, JIRA, and GitHub.
- Led development of structured API documentation systems using OpenAPI/Swagger with NLP-based spec-to-doc automation.
- Built secure, versioned content delivery APIs for model-generated knowledge artifacts.
- Integrated Elasticsearch with transformer-based semantic search for developer portals and support automation.
- Automated technical content pipelines, improving update cadence and consistency across multiple teams.
- Built Python-based toolchains for code parsing, vector indexing, and changelog summarization.

Founder & Self-Employed LLM/NLP Engineer
ProgramBots · Freelance/Self-Employed
Jan 2014 – Oct 2018

- Designed and developed an AI-assisted learning platform for middle school students focused on drone and robotics programming.
- Built rule-based and statistical NLP models to generate and recommend curriculum content.
- Developed chatbot-like interfaces using AIML and regex-based engines for guided learning and support.
- Applied decision tree ensembles and clustering (e.g., k-means) for adaptive learning paths and learner segmentation.

- Deployed analytics and content systems using Flask, Pandas, and early ML frameworks (e.g., scikit-learn, NLTK) on AWS EC2/S3.
- Emphasized secure, FERPA-aligned data handling and hosted the platform with scalable usage monitoring.

Web Technologist – Production Engineering & Automation
Adobe Systems (via 3rd party) · Full-time
Sep 2009 – Dec 2012

- Monitored and automated support for 130+ Java-based services across 2,000+ Linux/Solaris servers.
- Built Python and Bash scripts to automate server health checks, log aggregation, and anomaly detection.
- Integrated telemetry into dashboards for Adobe.com deployment pipelines.
- Automated validation workflows for security compliance, using Perl, Python, and system daemons.

Member of Technical Staff – Infra & Support Automation
Persistent Systems (ClairMail)
Jun 2003 – Jul 2009 · Novato, CA

- Built Python and Bash scripts for monitoring, alerting, and log processing across mobile banking infrastructure.
- Automated backup, deployment, and reporting tasks to reduce incident response time.
- Developed REST-based tools for interacting with internal infrastructure APIs.
- Contributed to system hardening and PCI-DSS compliance tasks for major U.S. banking clients.

Project Intern – Backend & Systems Admin
IIT Bombay – KReSIT
Jan 2002 – May 2003

- Built backend infrastructure for IIT Bombay's Distance Education Program.
- Developed tools for the Affordable Solutions Lab focused on tech for underserved communities.
- Managed Linux research servers and automated sysadmin tasks using Bash and Perl.

Core Expertise

- **LLM Engineering**, **NLP**, **API Development**, **Secure ML Infrastructure**, **Vector Search Systems**
- AI/ML: BERT, GPT, Hugging Face, OpenAI API, Sentence Transformers, PyTorch, TensorFlow, Scikit-learn
- Backend: FastAPI, Flask, Node.js, GraphQL, REST, gRPC
- Data & Search: Elasticsearch, OpenSearch, Redis, MongoDB, PostgreSQL, SQLite
- DevOps: Docker, Kubernetes, Terraform, GitHub Actions, Jenkins
- Security: OAuth2, JWT, RBAC, audit logging, PCI-DSS, ISO 27001, OWASP
- Programming Languages: Python, Go, Bash, Perl, JavaScript, TypeScript
- Monitoring: Prometheus, Grafana, Elastic Stack, custom Python-based monitors
- Infrastructure: AWS (S3, EC2, Lambda, SageMaker), Azure, Linux (RHEL, Ubuntu), CI/CD Pipelines

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Tech Stack (Comprehensive)

LLM Engineering, NLP, API Development, Secure ML Infrastructure, Vector Search Systems, Airflow, AWS, Bash, BERT, Docker, Elastic Stack, Elasticsearch, FastAPI, Flask, GitHub Actions, Go, GraphQL, GPT, gRPC, Hugging Face, ISO 27001, JavaScript, Jenkins, JWT, Kubernetes, Linux, MongoDB, Node.js, OAuth2, OpenAI API, OpenSearch, OWASP, PCI-DSS, Perl, PostgreSQL, Prometheus, PyTorch, Python, RBAC, Redis, REST, RHEL, SageMaker, Scikit-learn, Sentence Transformers, SQLite, Terraform, TensorFlow, TypeScript, Ubuntu