ADITYA AGARWAL (He/Him/His)

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TECHNICAL SKILLS & CORE COMPETENCIES

Languages & Frameworks
Python, Django, Flask, Java, JavaScript, TensorFlow

AI/ML & Security
RAG Pipelines, Agentic Systems, BERT, NLP, Vector Databases, LangChain, Llama-Index, Content Analysis, Threat Detection

Security & Compliance
Data Governance, Automated Monitoring, Security Controls

Cloud & Infrastructure
AWS, GCP, Docker, Terraform, High Availability Architecture

Data & Distributed Systems
MongoDB, MySQL, PostgreSQL, ETL Pipelines, Real-time Processing, Event-Driven Architecture, Microservices

Development Practices
Git, CI/CD, DevOps, REST APIs, Agile, Infrastructure-as-Code

PROFESSIONAL EXPERIENCE

Founding Machine Learning Engineer | Soopra.ai, San Francisco — **August 2024 - Present**

- Architected scalable AI infrastructure implementing Agentic systems with custom recommendation engines for personalized user experiences, improving engagement by 35%
- Developed production-grade AI pipelines for PDF document processing with vector database integration, enabling contextually relevant retrieval and enhancing security posture through automated content analysis
- Built resilient data processing systems creating Agent-first social media platform with high availability and distributed computing principles
- Implemented security controls for AI service deployments, ensuring compliance with data governance standards and threat detection capabilities
- Developed conversational AI security scripts that enhanced user interaction monitoring and data extraction with governance controls, achieving 30% improvement in user satisfaction and 20% reduction in onboarding time through automated security validation

Software Developer Intern | Soopra.ai, San Francisco — **June 2023 - May 2024**

- Engineered enterprise RAG pipelines with vector databases for multi-source data ingestion, implementing decay-function algorithms for reverse chronological retrieval with 95% embedding accuracy
- Designed event-driven chat systems utilizing domain-driven architecture to dynamically determine conversation flow, increasing user engagement by 25% through intelligent response routing
- Built scalable ETL infrastructure for real-time social media data extraction and processing using messaging patterns, reducing data loading time by 15%

Full-Stack Developer | SA Consultant, Bangalore — **October 2021 - June 2022**

- Delivered enterprise web application using Django framework with object-oriented design principles, increasing team efficiency by 30% and improving client communication through secure RESTful APIs
- Implemented billing and monitoring systems with PostgreSQL backend, enhancing project documentation accuracy and providing audit trails for compliance
- Deployed cloud-native solution on Heroku with AWS RDS integration, ensuring high availability, data security, and seamless scalability for distributed teams

EDUCATION

Master of Science in Machine Learning — GPA: 3.5/4.0 — **September 2022 - May 2024**
Stevens Institute of Technology, NJ

Bachelor of Engineering in Computer Science — **August 2017 - July 2021**
Alliance University, Bangalore

KEY PROJECTS

SOAR – Managed RAG System | Product Page

- Built an AI framework using Django, Llama-Index, and Qdrant to turn unstructured documents into a semantic, searchable knowledge graph with low-latency vector search.
- Developed customization tools for live prompt engineering, model swapping (Claude, GPT-4, etc.), and parameter tuning to optimize AI outputs.
- Productized solutions as embeddable widgets & REST APIs with automated PDF/CSV reports, Slack alerts, and ticket creation pipelines.
- Deployed on GCP with Docker/Kubernetes, enabling auto-scaling, security controls, and a roadmap for multimodal (image/table) support.

Toxic Span Detection & Content Security — **March 2023 - April 2023**

- Developed AI-powered security solution using BERT and CRF models for automated toxic content detection in online discussions, enabling proactive threat identification and semi-automated moderation
- Implemented ML-based governance controls highlighting malicious spans within content for enhanced attribute and security monitoring

critiQs - Secure Review Platform | Live Demo — **February 2023 - May 2023**

- Built cloud-native web application with integrated TMDB database containing 1000+ entries, implementing secure user authentication and recommendation algorithms
- Designed scalable architecture with REST APIs and database optimization, enabling high-performance content delivery and user engagement analytics

Insight - Enterprise Project Management Platform — **October 2021 - June 2022**

- Led development of Django-based platform with comprehensive project monitoring, billing estimates, and automated reporting capabilities for enhanced operational efficiency
- Deployed production system on Heroku with AWS RDS, implementing infrastructure-as-code principles for reliable data management and security compliance

Fantastic Computing Machine - ML Platform — **December 2020 - June 2021**

- Created SaaS platform on Flask framework for dynamic ML model deployment, enabling secure model sharing and collaborative development with enhanced deployment efficiency

CERTIFICATIONS & PUBLICATIONS

- Neural Networks and Deep Learning - Coursera (deeplearning.ai) | April 2020
- Published Research: "*Text Mining Approach Based on TF-IDF and SVM for Text Classification*" in *Latest Innovation for Future Education 2021* | ISBN: 978-81-947019-0-3 | January 2021