SUNEETA MODEKURTY

AI Consultant | LLM Fine-Tuning & RAG Systems | AI Governance & Responsible Innovation

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Professional Summary

Applied GenAI Consultant & Governance Strategist specializing in LLM fine-tuning (LoRA/QLoRA, PEFT), Retrieval-Augmented Generation (RAG), and multi-agent AI systems. Experienced in deploying advanced AI in compliance-heavy industries including healthcare, public sector, and finance, with proven ROI exceeding $500M

Recognized with the O-1A Extraordinary Ability Visa and an AI Thought Leadership Award, I bridge deep technical expertise with Responsible AI governance, explainability (XAI), and regulatory alignment across frameworks such as NIST AI RMF, HIPAA, GDPR, CPRA, and DSPM. My focus: helping leaders adopt AI systems that are trustworthy, transparent, and resilient

Core Skills

- **AI Governance & Responsible Innovation**: Risk frameworks (NIST AI RMF, HIPAA, GDPR, CPRA, DSPM), Responsible AI (RAI), Explainable AI (XAI), bias testing, auditability, policy frameworks
- **LLM Engineering**: Hugging Face Transformers, LoRA/QLoRA, PEFT, Retrieval-Augmented Generation (RAG), DSPy, DeepSpeed, FSDP
- **Optimization**: Quantization (bitsandbytes, GPTQ), pruning, knowledge distillation, sharded data parallelism, GPU offloading
- **MLOps & Deployment**: PyTorch, TensorFlow, FastAPI, MLflow, vector databases (FAISS, Pinecone, Weaviate), monitoring
- **AI Systems**: Multi-agent orchestration, chain-of-thought prompting, governance dashboards, SHAP/XAI, n8n automations
- **Data & Cloud**: Python, SQL, PySpark, AWS, Airflow, Tableau, Power BI
- **Leadership**: Executive training, global team management, governance policy design, cross-functional collaboration

Experience

AI Consultant | SANJEEVANI AI | Remote | August 2025 – Present
- Delivering AI governance consulting and training engagements for compliance-driven industries, including healthcare and public health
- Leading proposal design for executive AI training programs, focusing on governance, policy, and compliance frameworks

AI Architect | Stealth AI Startup | Remote | Feb 2025 – Present
- Implemented adaptive RAG pipelines using FAISS + Hugging Face embeddings, reducing hallucination rates by 30%
- Fine-tuned foundation models with LoRA adapters on healthcare transcripts, achieving domain adaptation with 40% lower GPU cost
- Designed multi-agent orchestration with built-in fairness guardrails, aligning with Responsible AI practices
- Delivered MVP in 90 days, accelerating prototype velocity by 40% via Supabase backend + optimized LLM inference
- Guided 20+ stakeholder interviews to de-risk adoption and sharpen compliance-sensitive market narrative

Responsible AI & Data Science Consultant - Team Lead | AIAL | Remote | Aug 2024 – Feb 2025
- Led a 14-member global team to deliver enterprise-grade Responsible AI (RAI/XAI) frameworks
- Served as Tech Lead for the AI Alignment Roadmap Builder team, defining technical strategy and re-architecting the project blueprint to align research priorities with development goals
- Integrated research on AI ethics, LLM alignment, and governance frameworks into implementation planning, ensuring alignment with global best practices
- Developed Responsible AI roadmaps that helped organizations translate academic principles into actionable governance strategies
- Supported a strategic partnership with the Responsible AI Institute, positioning AIAL for broader impact in the global ethical AI landscape
- Developed explainability and bias-detection libraries for LLM-based enterprise apps, ensuring compliance sign-off
- Directed cross-functional integration of Responsible AI frameworks into production NLP systems
- Modeled $250K annual cost savings via governance adoption across 5 enterprise products

Senior AI Consultant | First American | Remote | Sep 2023 – Feb 2025
- Partnered with underwriting and legal teams to deploy a GPT-4 + OCR pipeline, cutting document review time by 60% and saving an estimated $5M annually
- Built an LLM-powered RAG automation system for underwriting, enabling 80% automation of title operations and setting a new enterprise reference model
- Delivered SHAP-enabled forecasting pipelines that improved portfolio risk accuracy by 15–20%, directly influencing multi-million-dollar underwriting and legal decisions
- Standardized prompt engineering templates and validation frameworks, ensuring consistency across thousands of legal documents daily and reducing operational and regulatory risk

Senior AI, Data Science and BSA Consultant | Centene | Remote | Aug 2022 – Aug 2023
- Delivered a predictive analytics strategy using TruCloud claims data to identify cost drivers and reduce inefficiencies by 18%, contributing to $500M+ in validated Medicaid/Medicare compliance savings
- Applied transformer-based models to Medicaid claims anomaly detection, improving audit accuracy and compliance transparency
- Advised compliance executives through oversight dashboards (Power BI, SQL, AWS Redshift) that improved visibility by 48% and safeguarded sensitive records, helping avoid millions in regulatory penalties
- Optimized Medicare & Medicaid claims processing with automation pipelines (Python, SQL, Airflow), cutting manual interventions by 18% and generating multi-million-dollar annual operational savings
- Mentored and guided a team of 3 data scientists, standardizing feature engineering and A/B testing practices to improve model accuracy and ensure consistency across compliance workflows

AI Strategy Consultant | Confidential Client (Aviation & Education Platform) | Remote | Jun 2022 – Present
- Provided AI strategy coaching and implementation guidance to executive leadership
- Evaluated opportunities for AI integration into aviation/education products, balancing innovation with compliance requirements
- Delivered tailored training on responsible AI adoption, governance frameworks, and data strategy for scaling
- Designed a roadmap for embedding AI responsibly into product development, strengthening regulatory alignment

AI Data Science Consultant | GSMS Inc. | Remote | Nov 2021 – Jul 2022
- Partnered with pharma stakeholders to elicit requirements and translate business needs into scalable data solutions
- Advised pharma leaders and built fraud detection pipelines (Python, SQL, PySpark, Airflow) that improved detection precision and reduced processing time by 10%, strengthening audit integrity and safeguarding sensitive operational data
- Designed a centralized AWS data lake integrating invoices, FOIA reports, and competitive intelligence, boosting enterprise data accessibility by 60%
- Enabled $5M+ annual fraud loss reduction, tying analytics directly to compliance and retention impact

Research Scientist - (Bioinformatics – Neuro Genomics & Data Science) | WashU School of Medicine | Remote | Jan 2021 – Nov 2021
- Grant-funded research role advancing neuro-genomics and Alzheimer's Disease
- Accelerated NIH deliverables by cutting RNA-seq/proteomics analysis turnaround 30%, sustaining funding
- Strengthened biomarker discovery pipelines via pathway enrichment analysis (GSEA, Reactome), improving validation of drug targets
- Scaled workflows with HPC + Docker, processing 20% more samples within timelines

Research Assistant and Data Analyst (Cancer Bioinformatics and Data Science) | IUPUI | Aug 2018 - Dec 2020
- Improved breast cancer diagnostics by 18% using CNN-based histopathology models, applying advanced data processing and feature engineering for more precise tumor classification
- Developed comprehensive multi-omics pipelines using R and Bioconductor, integrating genomics and proteomics data for personalized medicine research, optimizing data manipulation and processing workflows

Strategic Initiatives & Adjacent Roles
Responsible AI Consultant | Confidential Client (Web Development in Regulated Industries) | Remote | Apr 2024 – Present
- Trained leadership on responsible AI adoption for healthcare and financial services clients
- Introduced HIPAA Security Rule and NIST AI RMF frameworks into organizational practices, preparing teams for compliance-heavy client work
- Designed governance-aligned AI/ML strategies that improved regulatory credibility for client deliverables

- Supported policy development workshops and adoption of ethical AI safeguards, ensuring sustainable practices

Bioinformatics & Data Science Cancer Researcher | WashU School of Medicine | Apr 2023 – Apr 2025
- Conducted colorectal cancer research on oxaliplatin-induced peripheral neuropathy; findings published as Molecular insights into oxaliplatin-induced peripheral neuropathy in colorectal cancer: Unraveling a potential signature (ASCO online publication)
- Applied single-cell analysis for PDAC, identifying potential therapeutic targets for pancreatic cancer treatment
- Collaborated with oncologists to integrate bioinformatics and AI pipelines into translational cancer research

Lead AI Data Scientist & Project Lead | SuperDataScience | Aug 2024 – Dec 2024
- Led a team of 5 on an AI/ML project forecasting likelihood of diabetes based on age, gender, and lifestyle factors
- Taught, mentored, and guided the team through data science best practices from data selection, EDA, feature selection to deployment
- Conducted live sessions on bioinformatics data science, bridging research methods with applied data science
- Oversaw project delivery, troubleshooting, and final presentation of actionable insights

Freelance Instructor, AI, Data Science & Analytics | ATLytiCS Inc. | Aug 2022 – Aug 2024
- Served as instructor and mentor for 12 job seekers transitioning into careers in AI, data science, analytics, and business intelligence
- Designed and delivered sessions on project planning, data acquisition, exploratory analysis, and business recommendation building
- Provided one-on-one career guidance and technical mentorship, equipping learners with industry-ready skills

Education & Certificates
- MS in Bioinformatics & Data Science | Indiana University, Indianapolis, IN (2020)
- MA Psychology, MS Analytical Chemistry, B.Ed. & B.Sc. Chemistry | Various Universities, India
- AI Security and Governance, DSPM – Securiti.ai
- NIST 800-53r5: Introduction to Security and Privacy Controls – LinkedIn
- Building a HIPAA Compliance Program – LinkedIn
- GDPR Compliance – LinkedIn
- Implementing the NIST Privacy Framework – LinkedIn
- Building and Auditing a Cybersecurity Program – LinkedIn
- Generative AI: Fundamentals, Applications, and Challenges – Coursera
- Machine Learning: Data Science for Climate Change (Energy Efficiency of Buildings) – Omdena (Philadelphia, USA Chapter)

Recognition & Achievements
- O-1A Visa for Extraordinary Ability (AI, Bioinformatics & Data Science)
- AI Thought Leadership Award 2025 – Recognized by Leadership Federation for impact in Responsible AI
- ASCO Publication – Abstract accepted at American Society of Clinical Oncology Annual Meeting
- Author – The AI-Human Synergy: A Data Scientist's Vision for the Future (Amazon, 2024)