AAMER JALAN

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EDUCATION

Ashoka University   September 2022 – May 2026
Bachelor of Science in Computer Science & Entrepreneurship, Minor in Mathematics

TECHNICAL SKILLS

AI/ML: Machine Learning, Deep Learning, Multi-Agent Systems, MLOps, Generative AI (LLMs, Diffusion Models), Time Series Forecasting, Feature Engineering, Predictive Analytics, Statistical Inference, Decision Intelligence

Backend/Infrastructure: Python, AWS (Lambda, Glue, CDK, HealthLake, Bedrock, EventBridge), Microservices Architecture, Serverless, Real-Time Systems, Data Pipelines, ETL, Distributed Systems, System Design

Data & Compliance: FHIR R4, HIPAA Compliance, Data Governance, PySpark, Regulatory Compliance, Audit Logging

PROFESSIONAL EXPERIENCE

CoralEHR | CTO & Co-Founder   September 2025 – Present

- Architected AI-native behavioral health EHR platform for private pay and out of network clinicians; designed AWS serverless infrastructure using CDK with multi-stack microservices architecture isolating FHIR R4 datastore from business logic, validated through 30+ clinician interviews identifying critical workflow automation opportunities
- Built production-grade AWS HealthLake FHIR datastore achieving full HIPAA compliance through encryption at-rest/in-transit, comprehensive audit logging across 20 system components, and RBAC/ABAC access controls; established per-clinician and per-patient data isolation with 6 compliance checkpoints ensuring protected health information security
- Engineered scalable API Gateway and Lambda-based microservices designed to support 1,000+ concurrent users with real-time integrations enabling seamless frontend-backend communication; built multi-agent AI system for automated clinical workflows maintaining full audit traceability

Time Rewards | Machine Learning Engineer   August 2025 – September 2025

- Architected end-to-end ML pipeline for billable hours forecasting; built production-ready AWS serverless solution processing 100,000+ records across 3 demo clients with Glue ETL, EventBridge orchestration, and Lambda inference delivering MAPE <12% for deployment across 1,000+ consulting, legal, and nonprofit organizations
- Built production data pipeline with automated client discovery, PySpark feature engineering transforming 75+ temporal and categorical variables, and CSV-to-Parquet transformation reducing storage costs by 75%; evaluated 8 time series models (ARIMA, Prophet, XGBoost, LightGBM) optimizing for accuracy, latency, and cost constraints
- Launched LLM-powered natural language generation system translating model outputs into actionable insights for non-technical stakeholders, eliminating manual analyst intervention and accelerating decision-making workflows

NUVAMA Wealth (Edelweiss Group) | Software Engineering Intern   May 2025 – August 2025

- Engineered real-time event alerting system using SignalR with topic-based pub/sub architecture serving 1,000+ wealth management platform users across 12 modules; designed event schemas for 25+ event types, logging infrastructure capturing 500,000+ events daily, and monitoring dashboards tracking 30+ KPIs enabling data-driven observability
- Shipped browser instrumentation capturing execution context across 8 critical user flows for enhanced audit trails supporting regulatory compliance; established acceptance testing framework validating 200+ test scenarios and system observability infrastructure ensuring 99.95% reliable event delivery

PROJECTS

Portfolio Optimization Under Market Stress | Undergraduate Capstone Project   September 2025 – December 2025

- Built ML-driven portfolio optimization framework improving Sharpe ratio by 9% and Sortino ratio by 24% while reducing maximum drawdown by 12% during high-volatility regimes; trained diffusion models on 13+ years of NSE data across 20 stocks to synthesize 10,000+ rare market stress scenarios enabling robust tail-risk assessment improving downside protection
- Applied Hidden Markov Models for market regime classification across 3 volatility states achieving 85% accuracy; constructed predictive analytics pipeline leveraging stochastic calculus to model market dynamics across 20 securities informing quantitative allocation strategies validated through anchored walk-forward testing across 157 out-of-sample folds
- Supervised by Prof. Sandeep Juneja (PhD Stanford); integrated deep learning with quantitative risk management producing decision intelligence systems delivering allocation strategies resilient to tail events and systematic market stress

AWARDS

1st Place – IIM Ahmedabad Tech for Social Good Hackathon   March 2025
Built TicVision prototype enabling symptom tracking for Tourette's patients; pitched solution and $5.6B addressable market business model to 3-judge panel winning against 50+ teams nationwide