

# DHARMENDRA AGARWAL

AI & Analytics Engineering Leader | IIT (BHU) Varanasi '14

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11+ years shipping analytics and ML systems that drive compliance, risk, and revenue outcomes - now building GenAI agents that put self-serve intelligence in the hands of decision-makers.

## AT PAYPAL (2021 - Present)

<b>~5 Yrs</b> Compliance Analytics	<b>3</b> Programs Owned	<b>6+</b> Cross-Functional Teams	<b>2,000+</b> Weekly Report Views	<b>1st</b> AI Agent in GFCCP
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## STARTUPS & CONSULTING (2014 - 2021)

<b>5</b> Companies	<b>10+</b> Enterprise Clients	<b>100+</b> Viz Reports Built	<b>4</b> Industries	<b>7+</b> Measurable Business Outcomes
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## TECHNICAL SKILLS

<b>AI &amp; GenAI</b>	LLM Agents, RAG Architecture, LangChain, Multi-Agent Systems, MCP, Prompt Engineering
<b>Data &amp; ML</b>	Python, SQL, R, BigQuery, Spark, Hive, Forecasting, NLP, Recommender Systems, Deep Learning
<b>Visualization</b>	Tableau, Power BI, Looker, Looker Studio
<b>Automation</b>	Power Automate, JIRA API, Workflow Orchestration, CI/CD Pipelines
<b>Industries</b>	Financial Crime Compliance, Risk Analytics, Fintech, Ecommerce, IoT, Hospitality, Consulting

## EXPERIENCE

### Senior Data Scientist

PayPal - Global Financial Crimes Compliance Program (GFCCP)

Bangalore  
Sep 2021 - Present

#### AI & Agentic Systems

- Identified the opportunity to apply LLM-based agents to compliance analytics. **Prototyped the multi-agent system independently in test** (LangChain, structured RAG, 7-stage prompt pipeline, YAML-driven knowledge base), then **partnered with the infra team to deploy in production** - eliminating manual data-science dependency for end users.
- Evangelized AI capabilities across GFCCP** - introduced compliance analysts to agentic workflows, demonstrated how GenAI can enhance day-to-day operations, and motivated adoption across a traditionally non-technical org.
- Built an analytics chatbot for compliance programs** - users now access data insights in seconds via natural language instead of waiting weeks for manual query fulfillment. System runs BigQuery queries in the background with infosec compliance and access controls baked in.

#### Compliance Analytics & Frameworks

- Built cross-program funnel analysis framework** linking upstream rule accuracy to downstream losses and cost. Quantified how top-of-funnel decision quality reduces disputes, repeat limitations, and investigation volume.
- Developed AML/SAR workforce planning model** projecting 120-day SLA risk across 10 work groups on BigQuery with crossover detection and early-warning alerts.
- Redesigned CI Average Handle Time methodology** - replaced legacy model with a statistically robust framework, restoring credibility and operational fairness across investigation teams.
- Led Due Diligence program continuity for 7 months** - assumed parallel end-to-end ownership during transition while mentoring team members for long-term handoff.
- Built SAI Investigator Productivity Index** - standardized algorithm (schedule adherence + PDA activity + handle time) for SAR and BRM SAI across 1,000+ investigators.

#### Reporting, Dashboards & Automation

- Delivered org-wide productivity dashboard, holistic reporting suite, and investigator performance scorecards across Tableau, Looker, and Power BI - serving 150+ daily stakeholders and 2,000+ weekly views with multi-level drill-downs.

- Automated data request intake via Power Automate + JIRA, routing across 10+ compliance programs with SharePoint attachment handling.

## Lead Data Scientist

Bangalore

Loyalty Consulting (Clients: HP Inc, Sleep Number, The Face Shop, Springfield + others) May 2017 - Sep 2021

- **Grew client app active users from 38% to 49%** through customer analytics and multi-channel targeted segmentation.
- **Achieved 15% lift in feature engagement** via systematic A/B testing and retention analytics.
- **Built recommender system** for e-commerce - 86% test accuracy, 73% production using collaborative filtering and neural nets.
- **Designed CRM strategy driving ~30K app downloads, ~20% better campaign ROI**, and 20% increase in loyalty customers for a major retailer.
- **Boosted app store ratings by ~0.5 pts** through NLP-driven sentiment analysis of customer reviews.

## Manager, Business Intelligence

Bangalore

Ruptub Solutions Pvt. Ltd. (Treebo Hotels)

Mar 2016 - Mar 2017

- **Prevented 6% revenue leakage** by building analytics framework for no-show and cancellation optimization.
- **Drove 10% higher ARR and better occupancy** via data-driven pricing using booking funnel, competition, and market data.
- Automated 10+ reports for 5+ cross-functional teams, cutting reporting turnaround and accelerating decisions.

## Business Analyst - Kantar Analytics (formerly Analytics Quotient)

Nov 2014 - Feb 2016

Sentiment analysis for a European cruise line (+25% customer satisfaction); financial model and strategy simulator for a major US retail client; survey analytics for a global beverage company.

## Software Engineer - Muraai Information Technologies Pvt. Ltd.

May 2014 - Nov 2014

Developed and deployed Java-based microservices for client-facing applications.

## EDUCATION

**B.Tech** - Indian Institute of Technology (BHU), Varanasi

2010 - 2014 | GPA: 8.29

11+ years of building. Now AI-amplified.