

# Shivam Kotwalia

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## 👤 PROFILE

~8 years of experience in architecting and **scaling data-intensive solutions** by leveraging advanced machine learning algorithms and big data technologies. Managing key stakeholders & **collaborating with CXOs** to deliver innovative, high-impact solutions that use **advance analytics** techniques to drive business value and functional excellence. **Lead a team of brilliant** data scientists and engineers who are experts in deploying cutting-edge algorithms and systems to deliver tangible results

## 📁 PROFESSIONAL EXPERIENCE

### Reels Analytics Solution Manager | Strategy & Ops

05/2021 – present | India

Instagram 🌐

**Reported to "Head of Partnerships" and led a team responsible for all thing analytics Reels in India**

- Responsible for vernacular development of "Reels in Bharat", by building a market-fit model to find the apt target group(TG), launching & measuring engaging features (AR effects, music playlists, etc.) in the creator ecosystem
- Using **stack ranked model** designed an execution grid to grow the Creator & Music Partnerships book of business by **10% Y-o-Y**, which generated an incremental **30% lift in IG Reels play**
- Architected the data-intensive user journey for IG's biggest creator education program [BOI] 🌐 with **500K 🌐 + registrations** & driving meaningful acquisition by targeted scaled in-app promotion with a 7% end funnel conversion rate
- Institutionalized the "**Influencer Recommendation Engine**" which brought brands closer to 10K+ small tier 2-3 city best creators, generating a **5% stat-sig lift in BLS** (brand lift study)
- Implemented program **performance evaluation model**, for measuring the efficiency of the marketing campaigns, spend (across funded programs) & increased **12% dollar efficiency Y-o-Y**

### Lead Data Scientist | Digital Ops

07/2018 – 04/2021 | India

McKinsey & Company 🌐

**Led the Analytics wing of the Procurement division at "D&A McKinsey Solutions 🌐"**

#### Document Intelligence

(Lead AI Architect & Delivery Head)

- Used computer vision (object detection, document layout, OCR) & NLP (entity recognition, smart search, QnA) models to develop the **automated legal contract (document) ingestion** system, which **returns key KPIs** and important metrics, further **mapping them with saving opportunities**
- **\$7M+ quarterly savings** for a giant mining equipment manufacturer, by identifying spend leakages (payment penalty, material quality assurance ...) in procurement & vending contracts
- Further designed a browser-based scalable front-end for a self-serve model, **within a year of operation on-boarded 13+ new client logos** with 70+ engagements

#### Electronic Costing

(Product Manager & Tech Lead)

- Developed an electronic PCB scanning system using a complex object detection model to identify components with high precision and further OCR the components for technical dimensions. Generating an "**all bottoms-up electronics analysis**" for optimizing electronics cost even at the smallest capacitor level
- Reduced the product teardown analysis by 30%, and within a **span of 2 weeks, saved \$3M+ procurement spend** by should-cost analysis for Taiwan-based electronic giant.

#### Spend Intelligence

(Lead ML & Deployment Engg)

- Designed a **spend cube analysis model**, which analyses spend data and helps clients work on hidden cost-saving opportunities. Created intensive **data pipelines** to structure data, using **ML model categorized spend data**, and produced detailed analyses to identify opportunities for technical and commercial improvements.
- Reduced quality control process by **~30% by introducing a statistical pricing module** to validate the spend data flowing in and finding anomalies in price & supplier inconsistency using local outlier

- Designed the covid procurement guide which helped achieve supply chain resilience to quickly detect, respond to, and recover from disruptions


### Software Costing

(ML. Engg)

- Designed a **multi-headed ML classifier to disintegrate software code** into its individual components or features & **build a pricing model to estimate the cost of each feature** based on the resources and labor. Helping firms quickly & accurately determine the **theoretical cost of developing or acquiring a piece of software**.
- Helped a Telecom client **decrease the vendor cost by 12%** for developing the web e-commerce checkout, by identifying opportunities to reduce or optimize the cost of the software

## Senior Data Scientist

07/2015 – 06/2018 | India

Nagarro Inc. 

**Founding member of CoE, responsible for infra setup & competency building**

- Created an automated rail-cart defect inspection system, built on a **hierarchy of convolutional neural network classifiers**. Detected faults in cargo carriers for a US-based logistic firm & **saving ~150 manual hours** per day
- Implemented a **watermark detection model** over uploaded images, while **synthetically preparing the data** and avoiding copyrighting infringement for a real-estate client

## SKILLS

### Machine Learning

Clustering, Regression, Classification

### Python

Numpy, Pandas

### Visualisation

Tableau

### SQL

Presto, HIVE

### Computer Vision

Classification, Object Detection

### Agile in ML/DS




## EDUCATION

### Bachelor of Technology, Electronics & Communication

2011 – 2015

Rajasthan University

## CERTIFICATES

- TensorFlow Contributor 
- Red Hat Certificate of Expertise in Directory Services and Authentication 
- Microsoft Certified Professional
- Red Hat Certified Virtualization Administrator 
- Red Hat Certified System Administrator 