

# VISHAL SHARMA

SENIOR ANALYST MODELER – PRICING (A&BI)

## CONTACT

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## SKILLS

- R PROGRAMMING
- R SHINY
- R MARKDOWN
- PYTHON
- MACHINE LEARNING
- DATA ANALYSIS
- TABLEAU
- VISUALIZATIONS
- IMAGE PROCESSING
- GIT
- SQL
- LATEX
- VBA
- SHELL SCRIPTING

## MY PUBLIC WORKS

- [PORTFOLIO TRANSFORMATION CALCULATOR](#)
- [PATHFINDER](#)
- [CBRE DIMENSIONS](#)
- [APERGY DASHBOARD](#)
- [COVID 19 DATASETS](#)
- [COVID 19 DASHBOARD](#)
- [ONLINE CV](#)

## PROFILE

Highly analytical and process-oriented scientist, strategist, and technical community builder with 7 years of cross-industry experience in numerous data science activities. Passionate about integrating statistical and computation methods into digital products to drive business value. I am a driven leader with interdisciplinary, technical background, combining academic curiosity with industry best practices. I greatly value mentorship, collaborative team building, creative solutioning, transparency, and personal growth. Research scholar with ongoing research on Deepfake detection technology with publications in progress.

## EXPERIENCE

### Equipped Analytical Intelligence

Senior Analyst Modeler

July 2021 – Present

**Project: Dashboard Optimization & Refresh | Domain: Data Science | Tableau, R Programming**

- Convert the R Shiny Dashboards to Tableau dashboards
- Lead a team of three analysts for the migration
- Optimization of the existing R Shiny Dashboards using advanced R Concepts
- Accelerate the performance of BAUs
- Adding or Creating Dimensions, Measures and Calculations as required

**Project: Delivery Engine | Domain: Data Science | R Programming**

- Develop a natural language system to predict the potential standardized value for a new categorical value found in the data warehouse
- Create a pipeline for one-click automation of Quality Checks and workflow efficiencies
- Create an algorithm for rationalization of code across teams
- Create data standardization mapping using NLP
- Work closely with product managers to understand the QA framework

**Project: Equipped Library | Domain: Data Science | R Programming, Python & RStudio Connect**

- Create an end-to-end R library from scratch
- Create functions supporting Performing and Non-Performing Loans
- Optimization & Modelling functions for the entire organization
- Automation of Pricing Models

**Project: Revaluations & Forecasting | Domain: Data Science & Analytics | R Programming, Excel**

- Conduct Internal trainings to teach the team R concepts
- Implement analytical concepts like Markov Chains in R
- Create models for predicting the strength of the portfolio
- Implement Statistical concepts like Monte-Carlo simulation of valuation and forecast performing & non-performing portfolios

## TOOLS

- R STUDIO
- JUPYTER NOTEBOOK
- GOOGLE COLAB
- VISUAL STUDIO CODE
- D3.JS
- PLOTLY
- HIGHCHART

## EDUCATION

### Ph.D. in Computer Science

2021-2025

**Thesis Title:** Detecting DeepFake Videos Based on Spatio-temporal Features & Audio-Visual Modalities Using Artificial Intelligence

### Master's in computer science

2017-2020

**Thesis Title:** House Prices Prediction & Analysis

### Bachelor's in computer science

2011-2015

**Project Title:** Inventory Management System

## PAPERS IN PROGRESS

A Systematic Literature Review on Deepfake Detection

## ACCOMPLISHMENTS

- FORTUNE 500 EXPERIENCE
- GIT CERTIFICATION
- PYTHON CERTIFICATION
- BEST SHINY APP PRIZE
- CUSTOMER DELIGHT AWARD
- SEVERAL APPLAUSES
- WORK EXPERIENCE FOR UK & BELGIUM

## CBRE

Data Scientist

January 2020 – June 2021

**Project:** Portfolio Transformation Calculator | Domain: Real Estate | R Shiny

**Link:** <https://vantage-delivered.com/calculator/index.html>

- Predict potential savings due to reduced staff during COVID-19
- Build best-in-class dashboard for multiple stakeholders
- Provide the flexibility to connect to various products based on the space calculation
- Plot the complete output before and after COVID-19 and predict the expected reduction in cost.
- Enable sharing functionality for sharing the scenario to other users.

**Project:** EDA Automation | Domain: Data Science | R Markdown

- Automate the generation of EDA Report so that anyone can run it
- Creating and regular updates in conditional library
- Resolve questions raised by stakeholders in conditions or graphs
- Generate EDA reports with custom visualizations using outsourced libraries like plotly, d3.js in R markdown

**Project:** CBRE Pathfinder | Domain: Real Estate | R Shiny, Python

**Link:** [https://cbre-client-solutions.shinyapps.io/Pathfinder\\_UI/\\_w\\_43db1e55/](https://cbre-client-solutions.shinyapps.io/Pathfinder_UI/_w_43db1e55/)

- Dashboard for executing and fetching results from various models/algorithms defined by CBRE experts
- Implement supervised learning methods to assist in the property management decisions for the clients
- The models created in Python and accessed using APIs in R
- Flask app runs on AWS and then APIs are hit using R to get the results after the execution of algorithm
- Flexibility to choose and run selected algorithms, download the results and save it

**Project:** Lease Admin Dashboard | Domain: Real Estate | Tableau

- Create tableau portfolio dashboard for various fortune 500 clients.
- Notification for the expiration of lease coming soon
- Graphs representing the area wise leases, owned or subleased properties
- Portfolio representing total area, total annual rent and operating expenses shown in the dashboard
- Maps showing the location of every office
- Coordinating with Tableau Admin Team for Production Deployment
- Calculation of KPIs based on the underwritten metrics

## National Savings and Investments Bank, Durham, UK

Junior Data Scientist

May 2018 – Jan 2020

**Project:** Sopra Banking Platform | Domain: Banking

- Extending information with third-party sources of information when needed (Experian/GB Group)
- Data mining using state-of-the-art methods
- Enhancing data collection procedures to include information that is relevant for building analytics systems
- Processing, cleansing, and verifying the integrity of data used for analysis
- Use of machine learning techniques such as k-means, neural networks, Naive Bayes, SVM, Decision trees, Random Forest, etc.
- Developing Predictive Models to determine users' likeliness of subscribing to a term deposit
- Developed an automated fetching campaign wise data of calls for doing data science and analysis activities

## STRENGTHS

- OPTIMISTIC
- TIME AND TASK MANAGEMENT
- PATIENCE
- QUICK LEARNING ABILITY
- PUNCTUAL WITH DEADLINES
- TECHNOLOGY AGNOSTIC
- POSITIVE ATTITUDE
- EMAIL ETIQUETTES
- SUPREME COMMUNICATION SKILLS
- INNOVATIVE

## PERSONAL DETAILS

**Spouse's Name** : Yogeeta Sharma

**Father's Name** : Surender Kumar Sharma

**Mother's Name** : Reeta Sharma

**Date of Birth** : 30<sup>th</sup> March 1994

**Marital Status** : Married

**Nationality** : Indian

## Sopra Steria

Module Lead

July 2015 – May 2018

### Project: Prediction of house prices | Domain: Real Estate

- Identify the area wise housing price in UK
- Outlier detection for extraordinary houses to be taken care separately
- Area wise frequency of type of house – detached, semi-detached, terraced.
- According to area, type of house, age, etc. predict the price of house and present to the customer while posting advertisement.
- Based on time series analysis, predict the price of houses in future
- Customer Segmentation and analysis – RFM algorithm to bucket customer into different categories
- Performed statistical analysis on the customer web data to track customer usage of the website and generate engagement reports.
- Presentation and embedding the model into website using the R Shiny app
- Visualizations using ggplot and heatmaps for correlation matrix.

### Project: Airbus | Domain: Manufacturing

- Impact Analysis (Apriori Algorithm for association)
- Worked with various NLP techniques namely Bag of Words, TF-IDF, TF-IDF-CF, POS-Tagging and word embedding etc.
- Performed Risk Analysis and have applied various statistical and predictive models like naive forecast, time series analysis, and multiple linear regression to detect the correct resolved group
- Presentation of data to the customer using Qlik Sense