

# Dr. Shemal Dave

## Head of Business Intelligence and Analytics

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BI and analytics leader (PhD, PMP) with 8+ years building data teams and tools from scratch across gaming, manufacturing, and global operations. Owns analytics end to end, from data infrastructure through forecasting and the reporting leadership uses to make decisions, working directly with the C-suite. Backed by an engineering-research background that brings genuine statistical rigor (Taguchi DOE, ensemble forecasting, AI automation) to problems that move revenue.

### CORE COMPETENCIES & SKILLS

**Analytics & AI:** Microsoft Fabric, MCP Servers (Python/JS), LLM integrated reporting, Workflow Automation, Predictive Modeling, Anomaly Detection

**BI & Visualization:** Power BI, Tableau, Copilot-Enhanced Dashboards, Executive Reporting, Data Storytelling

**Revenue Forecasting & FP&A Analytics:** Time-Series (Holt-Winters, Exponential Smoothing, Ensemble), Variance & Bridge Analysis, Scenario & Sensitivity Modeling, Backtesting (MAPE), Confidence Intervals

**Advanced Statistics:** K-Means Clustering, Multiple Regression Analysis, Taguchi Experimental Design, Monte Carlo Simulations, Markov Chains, Survival Analysis

**Data Engineering:** SQL Server, Oracle, ETL Pipeline Design, KPI Definition, Automated Reporting

**Program Management:** PMP-Certified, Agile/Waterfall Hybrid, Resource Planning, Budgeting, Risk & Change Management, Cross-Functional Leadership

### PROFESSIONAL EXPERIENCE

#### Head of Business Intelligence and Analytics

June 2024 - Present

#### Pong Game Studios, Woodbridge, ON

Joined as a Business Analyst and grew into leading the analytics function as the company scaled. Now leads a team of 3 (2 Data Analysts, 1 Business Analyst) plus cross-functional partners, owning BI across 500+ land-based locations and an iGaming arm processing over \$800M in annual bet volume. Reports to and advises the CEO, CFO, CTO, and VP of Sales & Product.

- Designed and built (using Claude Code) a company-wide analytics portal now used by the executive team as the single source for stakeholder reporting. Stood up a local data warehouse on a VM consolidating Power BI, SQL, and Oracle into DuckDB, feeding interactive dashboards, an in-built Holt-Winters forecasting engine with range analysis, and statistical anomaly detection.
- Built “Dr. D,” a retrieval- and tool-augmented AI assistant grounded in the warehouse’s indexed company data. It answers executives’ questions directly and surfaces data-backed gaps and opportunities, deflecting 10–15 routine analytics requests a week (about an hour of team time a day).
- Drove game-economy and revenue-optimization strategy using Taguchi DOE, K-means clustering, multiple regression, and Monte Carlo simulation; data-driven tuning of RTP, volatility, and player experience lifted Gross Gaming Revenue 19% and player retention 11%.
- Engineered custom Model Context Protocol (MCP) servers in Python/JS integrating Claude with SQL, Oracle, and Jira, automating reporting workflows and reclaiming ~20 analyst hours per week.
- Set analytical standards across the team and translated complex analysis into board-ready decisions leadership can act on in under a minute, partnering directly with the CEO, CTO, and VP of Sales & Product.

## Business Intelligence Specialist

Oct 2022 - May 2024

### Camden Door Controls, Mississauga, ON

- Hired on the product development team to write product manuals and assembly/QC SOPs, then progressively built out the company's product-data and inventory systems.
- Built Excel/VBA tools to automate product-number assignment and BOM entry, removing a slow, error-prone manual step.
- Set up QA/QC tracking sheets and inventory monitoring for the assembly floor, giving teams clear visibility into stock on hand, used, and refilled.
- Introduced barcode scanning to log inventory movements into CSV records feeding live Power BI dashboards, replacing manual spreadsheets with real-time visibility.

## Lead Subject Matter Expert - BI & Operations

Aug 2020 - June 2022

### Bartleby Technologies Pvt Ltd (Acquired by: Barnes & Noble Education Inc), Bengaluru, India

- Led the Civil Engineering expert team (in-house experts plus 100+ freelancers) handling 500+ student questions a day, tracking intake, acceptance and rejection rates, and rejection categories to maintain quality and volume.
- Selected to launch Bartleby Live Chat and ran it end to end, scaling it from 30 to over 1,000 questions a day in six months across all subjects, with a network of 50+ vendor experts and 8 in-house experts plus the QC team.
- Designed the operating KPIs (inflow rate, average session length, rejection rate, SME availability, QC score) and used inflow data to plan SME shifts.
- Built the Power BI reporting and presented it weekly to US leadership; authored the official Live Chat SME playbook used to train and QC the full expert network.

## Assistant Professor and Subject Matter Expert

Sep 2014 - Oct 2019

### Marwadi University, Rajkot, India

- Provided statistical and experimental-design consulting (Taguchi, regression), the same methods now applied to revenue and game-economy modeling.
- Taught engineering coursework and managed academic cohorts; research in this period produced a granted patent and the PhD thesis below.

## EDUCATION, CERTIFICATION & PORTFOLIO

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### Education:

**PhD - Advanced Concrete Technologies** | Marwadi University | 2017 - 2022

*Thesis: optimizing the design of alkali-activated concrete using the Taguchi method and IS code.*

**Master of Engineering - Structural Engineering** | Gujarat Technological University, India | 2014 - 2016

**Bachelor of Engineering - Civil Engineering** | Gujarat Technological University, India | 2010 - 2014

### Certification:

**Project Management Professional** | Project Management Institute | 2024

**Business Analytics** | Harvard Business School | 2023

**Data Science Specialization** | IBM | 2023

**Data Analytics Program** | Google | 2022

### Patent:

Co-inventor, Indian Patent No. 396605 — “Development of Sustainable Lightweight Aggregate Geopolymer Concrete at the Ambient Curing Temperature” (Granted 2022).

**Portfolio:** - Meet Dr. D. (My AI Assistant) → <https://shemalbi.com>