

# Shailesh Kumar

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## Data and Solutions Architect

### Profile

I am a Data and Solutions Architect with over 18 years of experience in successfully architecting and designing large scale, complex, Data and Analytics projects. I have experience of working closely with Business and Technical stakeholders ensuring that architecture and design delivers on quality, cost and timelines. In my current role, I lead a team of architects and designers delivering an Insights solution as part of enterprise wide Green Field implementation of IT ecosystem on multi cloud environment.

### Key Skills & Experience

- Experience in architecting and delivering Big Data implementations on Hadoop Data Warehouse environments – Data Lake implementations using Cloudera, Horton Works and Azure HD Insights
- Experience in building streaming solutions for Campaign triggers, API based solutions and real time dashboards with technologies such as Spark Streaming, Kafka and Hive.
- Expertise in defining Data Architecture for Information Management systems and Data Modelling with wide exposure in Dimensional Modelling
- Good understanding of multiple Information management and Integration technologies and latest trends in the industry – both COTS and Open source technologies
- Proven experience in Data Lake and Data Warehouse architectures and design – on prem and cloud - which has been gained through start to steady state implementations for large Mobile and Utility providers (Hutchison Three, British Gas, Orange, Vodafone)
- Wide experience in designing and implementing efficient Data Integration solutions for high volume data requirements on multiple Hadoop platforms, MPP platforms (Oracle Exadata, Netezza, IBM BDW), and parallel ETL platforms (Oracle Data Integrator, Ab Initio, Data Stage)
- Wide experience in building BI solutions using MicroStrategy, Business Objects and Power BI
- Experience of working closely with Marketing and Finance departments, conducting requirements workshops, documenting requirements specifications and creating conceptual and logical data models for Management Information marts and Application marts
- Experience in defining enterprise level Metrics catalogue with robust business definitions and business rules
- Excellent analytical, interpersonal and communication skills, able to effectively communicate with stakeholders, drawing on their knowledge of business requirements to produce better, more focused solutions
- Adept at SQL, scripting and programming languages with application in NoSQL data solutions frequently demonstrated in delivering proof of concepts
- Expertise in Data Analysis, Data Profiling and Master Data Management
- Successful, hands on experience of working in a demanding environment providing quick solutions for critical data analysis requirements
- Specialist knowledge of the Telecoms and Energy sector, with in depth experience of creating Data Models for Customer, Product, Billing, CRM, Workforce, Retail, Call Centre and Core Networks (2G/3G/4G).
- Experience of working agile, iterative and waterfall delivery processes
- Solid understanding of ITIL process and functions, including change management, incident and problem management processes.

### Technical Skills

<b>Bigdata/Hadoop Technologies:</b>	Azure HD Insights, Horton Works (HDP), Cloudera, Oracle BDA, IBM Big Insights, Hive, HBase, Tez, Pig programming, Streaming technologies (Kafka, IBM Streams, Spark Streaming)
<b>Cloud environment</b>	Azure, Oracle and AWS
<b>BI Technologies:</b>	MicroStrategy, Business Objects XI R3, AbInitio, Data Stage, Oracle Data Integrator, Data Stage, IBM Campaign Manager
<b>Relational Databases:</b>	Oracle Exadata, IBM Netezza, DB2, IBM Infosphere Balanced Data warehouse, Informix XPS
<b>Design/Modelling Tools:</b>	ERWin, Infosphere Data Architect, MS Visio, Rational Rose
<b>Scripting Tools:</b>	UNIX shell scripting, Python, PL/SQL, VB scripting, TCL/Tk, Expect
<b>OS Environment:</b>	Linux, Windows, Solaris, HP-UX, AIX

<b>Programming Languages:</b>	Python, SQL, HQL (Hive), C, Java
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## Career History

### August 2017 – present

#### Three Mobile

Lead Solutions Architect in a large transformation programme responsible for architecting Insights platform for Reporting, Analytics (machine learning and predictive modelling), Real time analytics and operational BI on Azure HD Insights and Oracle Exadata cloud service.

#### Core Responsibilities:

- Overall responsibility of Architecture defining Frameworks, Standards and Guidelines
- Engage with product vendors for product selection and work with multiple product vendors (Microsoft, Oracle, Microstrategy and SAS) to deliver the technical platform
- Work closely with client stakeholders (technical and business) – Chair Insight Governance board, representation in Architecture board and Data Governance board
- Guide a team of solution architects and designers

#### Key Achievements

Delivered approved data and technical architecture and designs for Data Lake solution with 120+ data feeds including streaming feeds and very high-volume Network data using industry standard data models. Resolved various cross technology integration issues working closely with the product vendors. Representation in Architecture and Governance boards advising on requirements, cross system integration issues and setting up data standards. Successfully delivered Insight Metric catalogue with 500+ well defined metrics with definitions which was appreciated by business.

### July 2016 – July 2017

#### British Gas - Centrica

Data Architect (contract role) responsible for rolling out the MI solution on Data Lake with focus on delivering reporting solution for Smart Meter roll out.

#### Core Responsibilities:

- Data and technical architecture and solution designs for the MI projects
- Creating and embedding architecture and design standards in MI design deliverables
- Ensuring quality of design deliverables

#### Key Achievements

Successfully delivered 9 Smart Meter performance management reports in a span of 6 months using Hadoop Data Lake on Horton Works, building Hive data marts and using SSAS and Power BI. The solution allows British Gas to plan and manage Smart Meter rollout thereby meeting the Ofgem mandate. Resulted in one of the fastest delivered projects. The success of Smart Meter reporting project resulted in my contract extension with additional responsibility of overseeing multiple BAU projects. Introduced several design process improvements ranging from creating design estimation tools, reconciliation solution, rationalisation of analytics and MI system stacks, etc.

#### Notable Projects

##### Smart Meter rollout

Successfully delivered phase-1 of the project in a span of 6 months with key performance management reports to allow management and planning of the rollout activities.

##### BPM Trading reports

Successful migrated the director level weekly trading reports from business managed shadow MI reporting solutions to strategic solution based on Hadoop Data Lake, Hive and SSAS.

##### Channel performance management

On course to delivering a multi-channel (36 channels) performance management solution to improve the promotion of Smart Meters. The solution gives end to end journey KPIs.

### March 2013 – June 2016

#### Hutchison 3G (H3G)

Information Design Lead working in the Enterprise Information team, responsible for the architecture and design governance across 2 technical stacks covering Enterprise Data Warehouse, Hadoop implementation, Operational Reporting, MIS reporting, etc.

#### Core Responsibilities:

- Provide design governance to the projects executed in the BI area
- Provide consultancy during Requirements gathering and analysis and business readiness activities.
- Responsible for the review and approvals of the vendor SOWs covering effort and costs associated with the projects
- Provide guidance to a team of 8 to 10 solution designers across multiple projects
- Provide early visibility of the impact in terms of effort and costs for the Enterprise Data Warehouse and Operational reporting systems

#### Key Achievements

Successfully delivered over 50 BI projects in 2 years across Data Warehouse and Operational reporting (over £2.5 million). Successfully introduced Hadoop system into the Data Warehouse environment. Responsible for Data and ETL Architecture of the Enterprise Data Warehouse from its beginning stages to a mature platform which is now supporting critical business reports for Network Performance, Customer Base reporting to shareholders, supporting SAS Analytics, detailed customer analysis and Customer Margin reporting.

### December 2011 – February 2013

#### IBM Business Services - Business Analytics and Optimisation practice

As a Data Architect in the BAO practice within IBM GBS, I provide consultancy services to the Mobile Telecommunications clients

#### Core Responsibilities:

- Provide consultancy services to the clients as part of BAO engagements
- Assessment of as-is solutions and definition of strategic Enterprise Data architectures
- Lead solution delivery teams for projects executed in global delivery mode
- Involvement in all aspects of information management from business requirements gathering and analysis, to defining architectures, creating conceptual, logical and physical models, design data integration solutions in the projects
- Provide advice in projects and bids, based on the experience in Telecommunications industry

#### **Notable Projects**

- **Smarter Campaigning – H3G**

Successfully delivered the Campaign Management solution involving IBM Campaign and Customer Data Mart

#### **Key Achievements**

Getting involved in the project since the beginning, I have worked closely with the Marketing team to understand their business requirements and delivered Data Models and Integration designs required to support the Campaign Management solution. I have managed a team of 4 designers, successfully delivering the macro and micro designs. I was responsible in suggesting and demonstrating the feasibility of reusing a legacy Mart to deliver a tactical solution for early launch of the Campaigns. Client has provided a very positive feedback on my contribution in this project.

- **Customer Base Metrics reporting – H3G**

This project delivered Contract and PAYG Customer Base and Metrics reporting capability to the Senior Management Team at Three. The solution was delivered on top of the Enterprise Datawarehouse as a Mart with capability to report on key metrics through MicroStrategy reporting layer. The work involved understanding the business rules for various metrics, carrying out data analysis, identify right source of data and implement the solution.

#### **Key Achievements**

This project was executed for the Enterprise Information department and delivered in a brief period. In addition to delivering the solution quickly, the emphasis was also on getting the correct metric numbers. I worked closely with business partner teams to ensure the data provided could be reconciled. The solution was highly appreciated for its design and the new capabilities that were given with it for users to analyse their base data.

- **Enterprise Data Warehouse – H3G**

Enterprise MI is a project to deliver the Data warehouse solution to support variety of the Analytics requirements by Marketing, Finance and Management Reporting requirements. The solution is built on IBM Balanced Data warehouse platform with DataStage as ETL tool and Microstrategy as the reporting tool.

#### **Key Achievements**

I have used my knowledge of the Mobile Telecommunications sector and my prior knowledge of the client's data assets from the earlier projects and helped them to create a roadmap for delivery of their Data warehouse solution. I also worked on the planning aspects for the multiple releases. I have brought in improvements in the delivery process by streamlining the data modelling and design process.

#### **August 2000 - November 2011**

#### **Torry Harris Business Solutions (THBS)**

Torry Harris Business Solutions (THBS) is an IT consulting and services firm. I joined Torry Harris after graduating. I have since held a number of positions, including developer, tester and engineer, progressing steadily into Senior Data Warehouse Consultant and working with high profile clients, including JP Morgan and most recently, Everything Everywhere (Orange).

#### **Senior Data Warehouse Consultant**

##### **Core responsibilities:**

- Working closely with clients to understand and fulfil agreed mandates
- Understanding business reporting requirements and creating high level design documents with dimensional models, Business Objects design and ETL rules for data transformation
- Ensuring the quality of the deliverable from the offshore ETL design and development teams
- Passing on high level requirements to the test teams to ensure a consistently good quality for all testing
- Writing proposals for project bids in BI area

#### **Notable projects**

I have listed below some key projects which highlight some of the activities I'm involved in and which demonstrate my exposure to a wide variety of technologies:

- **Home Office Broadband reporting**

Orange outsourced its Broadband systems to BT Wholesale. BT was to build a new BSS/OSS stack to manage the broadband customer base. As part of this project, customer information and their usage data were to be stored in a ODS layer within Orange's Datawarehouse to meet Law enforcement agency's reporting requirements.

#### **Key Achievements**

My role in this project was of a lead designer with responsibility to deliver the Data Models and the ETL business rules and ensuring the reporting requirements of Law enforcement agency are being met to satisfaction. Due to the tight deadlines of the project I was responsible for suggesting and planning for a phased approach of delivering the solution so that the most important reporting requirements were met on the required date.

- **Orange – T-Mobile Joint Venture**

The objective of this project was to create a national roaming network between the networks of the two companies which formed *Everything Everywhere*. In the first phase of the project, reporting requirements were gathered and enhancements delivered in 12 different Call Detail Records (CDR) subject areas of Mobile DWH for business reporting. The project also involved bringing the Broadband DWH in line with Mobile DWH, by enabling reporting on contract dates, to allow identification of customers with the newly formed company.

**Key Achievements**

I played the role of a senior DWH designer, responsible for the modifications to the data models, high level design documents and overall delivery of the solution. Despite the changes to almost all CDR subject areas, the changes were implemented by modifying a shared dimension which made timely delivery of the project possible.

This project was already falling behind when I first became involved. I was quickly able to identify a solution which enabled speed to market resulting in significant time and cost savings

**Other Key Achievements**

- Hutchison 3G Star of the Year award 2015
- Hutchison 3G *Unsung Hero* award 2013
- IBM award for significant contribution in improving the client relationship and perception rating
- Involved in writing technical bid proposals for several successful engagements
- Produced numerous case studies for Torry Harris for BI projects

**Education**

- Bachelor of Engineering – Computer Science (Manipal Institute of Technology)

**Professional Training Courses**

- AWS Associate Architect course
- Architectural Thinking (IBM)
- IBM Big Insights (Hadoop) and Streams (IBM)
- Netezza foundation and Advanced course (IBM)
- Dimensional Modelling (Kimball University)
- Ab Initio design training (Ab Initio)
- ITIL Foundation certified

**Personal Details**

Marital Status:	Married
Driving Licence:	Full Clean
Nationality:	British

**References**

Available on request