Madhwendra Pratap Singh

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Current Role
Application Architect at Cloud & Data Centre of Excellence at Nihilent Ltd.

Experience
- Current role at CoE involves sizing & realizing **cloud data platform** solutions through projects including estimations, execution & delivery
- Engage with prospective clients for presales, proposals & cutting-edge proof of concepts.
- **14 years of IT experience** with hands-on expertise to lead / execute projects across diverse skillsets - end-to-end DWH project life cycle (**Requirements, LDM / PDM, ETL and Data Visualization**) on MSBI, Azure Data platform & Power BI.

Expertise
- ✓ Dimensional modeling using Kimball methodology & schema design for SMP, **MPP & EPP** architecture
- ✓ Big Data – **ADLSGen2, Azure Synapse**, Azure SQL/Postgres, **Azure Analysis Services, ADFv2,** SSIS
- ✓ **Datalake** & EDW **ETL design** using Azure Data Factory v2, SSIS, **Data Quality**
- ✓ Database Programming – T-SQL, PL/SQL, DAX, MDX, Polybase, SQL Server performance tuning
- ✓ Data-visualization – **Power BI,** SSRS 2012/2016/Mobile, **Tableau**, QlikView
- ✓ Application dev skills – C# NET 3.5 / Win Forms / ASP.NET / JavaScript
- ✓ Exposure of **Databricks**, Informatica MDM, Google **BigQuery**, **Snowflake**, **Spark-QL**, **Azure DevOps**
- ✓ Domain Experience
  - o Lending & Asset Management
  - o Marketing – Media Planning and Digital Analytics
  - o Supply Chain – Production, Materials, Sales and Distribution, Inventory & Logistics
  - o MIS and Business Performance Measurement

Assignments Brief
Below is a chronological brief of carrier assignments at Nihilent Ltd. over past 14 years:

Period	Duration	Role	Client(s)	Project Location
Jul'19 – Jan'21	19 mths	Architect: SQLDW, Databricks, ADLS	Tata Capital Ltd.	Mumbai, India
Aug'18 – Jun'19	11 mths	Architect: Azure SQL, ADF, Azure AS	IIFL Wealth || HR Johnson	Mumbai, India
Jun'18 – Aug'18	3 mths	Pre-sales: Azure Data Platform	IndusInd Bank	Pune, India
Feb'18 – May'18	5 mths	Designer: SSAS TOM, PowerBI	SONY Europe	Basingstoke, UK
Apr'17 – Jan'18	10 mths	Designer: DW Azure SQL DWaaS	BajajFinServ || LTFS	Pune, India
Apr'14 – Sep'16	2.4 yrs	Designer: SSAS MD / TOM, Power BI	Havas Media, London	London, UK
Aug'13 – Feb'14	7 mths	Project Lead – SSAS, SQL 2012	Havas Media, London	Pune, India
Mar'13 – July'13	5 mths	Solution Designer - .NET / SQL	SABMiller	Pune, India
Oct'11 – Feb'13	1.5 yrs	Technical Project Manager	SABMiller	Pune, India
Nov'10 – Sep'11	1 yr	Project Lead -.NET	SABMiller	Pune, India
Oct'08 – Oct'10	2 yrs	Senior .NET Developer	SABMiller, South Africa	Johannesburg, SA
Sep'06 – Sep'08	2 yrs	Web Developer, C#.NET and MSBI	Nihilent Ltd.	Pune, India

Education

Degree and Date	Institute	Major and Specialization
PG Diploma in Adv. Computing	CDAC Sunbeam Karad	**Highest Scorer** in CPT exam –July2006
Bachelor of Engineering (CS)	RITEE, Raipur – June2005	68.79%
Senior Secondary, CBSE	KV Baikunthpur – June 2000	PCM with 66%
Higher Secondary, CBSE	KV Baikunthpur – June 1998	59.0%

Achievements

Achievement	Details	Period

CDAC - **Exam Highest Score**	CPT Topper – Sunbeam Karad**; Dual Gold-Medals** J2EE & .NET	Jul 2006
MCP - MCTS **70-536 certified**	.NET	Jan 2008
CEO's Excellence Award	Role - Senior Developer onsite	Nov 2009
Individual Recognition by Client	Role – Senior developer, Project Triumph at SABMiller, SA	April 2010
Team of the year (12 member)	Role - Project Lead – SAB Enhancements Offshore	Nov 2012
Nihilent CEO's Award	Role –MSBI Project Lead; **Associate of the Year** Award	Jan 2014

Assignments Details (Chronological from Recent)

EDW Solutions Architect
Client Name: Tata Capital Limited, Mumbai
July'19 – Jan'21
Azure Data Lake and MPP EDW Implementation - Cloud Enterprise Data warehouse, ETL & Reporting
Tools - **Azure Data Factory v2, Azure Synapse, Tableau, Talend, Azure Data bricks, Azure Data Lake**
Responsibilities –

- EDW Solution component selection
- Azure Data Lake Design; Data Cleansing Solution design
- EDW LDM modelling, STM & design for Azure Synapse based Enterprise Data-warehouse solution
- Logical Data model and Physical Data model to integrate 700 tables from 15 Sources in the EDW
- Metadata driven ETL using Azure Data Factory based ETL\ EL
- Delivery of Finance Data Mart
- ETL optimization through Micro-batching using Azure Functions, Azure Event Grid & Azure Data Databricks
- Expose EDW for Business Users using Tableau Reporting
- Delivery of 11 data-marts from the EDW

Azure Data Solutions Architect
Client Name: India Infoline Wealth (IIFLW) Wealth and Asset Management, Mumbai
June 2018 – Jul'19
Cloud Enterprise Datawarehouse, ETL & Reporting Development
Tools - **Azure Data Factory v2,** Azure SQL database, **Azure Analysis Services and Power BI**
Responsibilities –

- Pre-sales – Technical Solution authoring; Efforts/Cost estimation and Proposal presentation
- Delivery of EDW solution based on 11 On-premise and SDFC source applications
- Prepared detailed sizing of Azure PaaS and IaaS components to optimize cost
- Provided the customer with 3 years Azure consumption TCO
- Engaged with customer and Microsoft to conduct reviews of the PaaS architecture sizing
- Developed detailed task level project plan and conducted Project Kick-off at customer site
- Contributed to on-going requirements gathering, data profiling and documentation tasks
- Work in progress on detailed dimensional model and physical schema design
- Project Execution and Weekly Status Reporting

Lead Power BI Consultant
Client Name: SONY Europe Professional Services, Basingstoke, UK
Feb 2018 – May 2018
Global Compliance Datawarehouse and Power BI reporting development based on SCCM datawarehouse.
Tools - SQL Server Analysis services **Tabular Object Model**, Microsoft **Power BI**
Responsibilities -

- Designed the Tabular dimensional data model on SCCM datawarehouse
- Developed and Deployed the SSAS Tabular model solution
- Designed and developed the bespoke features of Power BI
  - Dynamic Measure and Labels on X and Y axis; Slicer Selected value display
  - Built-in dashboard documentation and cover page

- Delivered dashboard for Microsoft and 3rd party patch Compliance, Software and Hardware Inventory, Vulnerability, Client Health and Antivirus status reporting
- Coordination with offshore team members to review and assist with assigned tasks
- Weekly Status reporting and progress review with client project executives
- Conducted Power BI and DAX Training for client associates

Achievement - Individual Appreciation and Accolades by the Client for the entire team on-project closure

Senior Solution Designer – Azure and MSBI
Client Name: NBFC- L&T Financial Services, Pune and Mumbai
Nov 2017 – Jan 2018
Digital Transformation –Digital Marts NBFC Prospect acquisition framework and Enterprise DW Integration
Tools - **Azure SQL Datawarehouse**, SSIS, **Polybase, Azure BLOB storage, C#.NET**
Responsibilities:

- Conducted requirements analysis with business executive and data science team
- Conducted data standardization session and developed templates to uniformly integrate prospect data from multiple 3rd parties provided in disparate file formats
- Designed and developed customizable rule-based Data cleansing C#.NET application
- Integrated the Data cleanings utility in SSIS based ETL
- Designed and implemented Metadata driven
    - ETL solution to load prospect data from on-premise to Azure BLOB storage using AZCopy
    - ELT solution to load data from Azure BLOB Store into Azure SQL DwaaS using Polybase
- Designed the Physical Schema on Azure SQL datawarehouse for digital Marts
    - Prospect Mart – new prospect data acquisition
    - BureauMart – for efficient storage of Bureau scrub output from multiple credit bureaus
    - Single Customer View – Integration EDW Customer with Prospect and BureauMart
- Implemented data flows [Cleanse – Load –Dedupe -Bureau Scrub – Enrich] cycle for prospect data
- Conducted UAT with Data science team and deployed the final solution

Senior Solution Designer – Azure DWaaS and MSBI
Client Name: NBFC - Bajaj Finserv, India, Pune
Oct 2016 – Oct 2017
Digital Transformation – Collection Performance Mart reporting and Prospect Mart for New Customer Acquisition
Tools: Azure SQL Datawarehouse, SSIS, Polybase, Azure BLOB storage, SSRS Mobile report Publisher, SSRS 2016, Power BI Report Server and desktop client
Responsibilities:

- Developed automated ETL solution to ingest data from SFTP into Azure BLOB Storage
- Developed dynamic ETL scripts to load in Azure SQL datawarehouse
    - Slowing changing attributes
    - Incremental data
    - Upload data from multiple file formats from any partners with any business column names
- Developed the Prospect Mart on Azure SQL datawarehouse ensuring efficient data distribution keys
- Designed SSIS data flows for de-duplication of existing customers and execute Bureau scrub
- Designed the developed the Bureau Mart on Azure SQL datawarehouse for CIBIL bureau data ingestion
- Developed reports for Collection efficiency, Penalty percentage and Channel wise daily and monthly collection trend, Cost Analysis, Portfolio Analysis and Revenue Trends
- Developed T-SQL based datasets using Azure SQL DW as source for SSRS mobile reports
- Implemented Power BI reports with following features –
    - Slicers for Product, Geography and date dimensions
    - In-chart drilldowns for Geography and date dimensions
    - Complex DAX expressions
    - Implemented power BI custom visuals and formatting of dashboards as per client corporate colours
    - Deployed dashboards on Power BI service

Lead SQL Server and MSBI Developer
Client Name: Havas Media, London UK, Media Digital
Apr 2014 - Sep 2016

Tools: SQL server 2012, SSIS, SSAS Tabular/multi-dimensional, SSRS, DAX, MDX, Power BI, Tableau 9, C#.NET, ASP.NET, SharePoint 2010
Responsibilities:

- Developed Media Planning Finance Reporting / Operational Dashboards using SSRS and SSAS Multi-dimensional cube source
- Developed Dominos competitive intelligence dashboard by creating Power BI data model
- Developed PowerView dashboards and Powerpivot based excel pivot reports using cube as source for finance reporting; deployed on Office 365.
- Developed finance dashboard in SSRS 2012 with SSAS Multi-dimensional cube source
- Developed Monthly operational dashboard in Tableau 9.
- Developed bespoke client reporting solution, using SSAS cube, SSIS data flows and ASP.NET web front ends to deliver monthly/yearly spend and campaign performance reports for telecommunications major client of Havas Media UK
- Engaged with end users for requirements and prepared WBS estimations & project plans
- Designed the SSIS ETL development :
    - Developed SSIS ETL patterns for **full, incremental and historical** loads of SQL data marts
    - Developed ETL Subsystems for SK generation, Hierarchies, **Type 2 SCD**, Data Lineage and Auditing, Error configuration and logging, Archiving
- Developed **Tabular cube and OLAP based SSRS reports** :
    - Developed Bus Matrix and Star schema data models
    - Developed cube with 60 business measures analysed across 13 dimensions and Time
    - Implemented Dynamic row level security and Cell level security in SSAS tabular and multi-dim cubes
    - Developed calculated measures using the DAX Calculate() function and Time- related facts and KPIs – YOY, YTD, MTD analysis
    - Integrated Google DCM campaign data into existing multi-dimensional Finance cube
    - Developed MDX based calculated measures and RAG KPI's in multi-dimensional cube; automated formatted HTML & SSRS reports in daily email delivery
- Developed quantitative data confidence dashboard Delivered multiple improvements in ETL load-time performance and cube functionality enhancements

MSBI Project Lead for offshore development team
Client Name: Havas Media, London UK, Media Digital
Sep 2013 – Nov 2013
OLAP Data warehouse/Cube, ETL and Report development
Tools: SQL server 2012, SSIS, SSAS Tabular/multi-dimensional, SSRS, MDX,
Responsibilities:

- Prepared detailed WBS **estimations and project-plan**
- Designed the data model using **MS Visio** – Star schema with Regular, Degenerate dimensions, **Transaction and Lag/Duration** facts
- Designed the data warehouse and developed multi-dimensional cube; Developed SSIS ETL patterns for **full, incremental and historical** loads
- Provided code-review and assisted the team with solutions for SFTP download, JSON extraction to SQL, and **dynamic fact partitioning, performance tuning** of stored procedures and SSIS ETL
- Developed solution for **degenerate dimension processing** and **most recent fact partition** processing
- Developed time-lag fact related stored procedures
- Written MDX scripts and queries for calculated cube measures and named calculations
- Developed Dynamic MDX queries for automatic verification of cube vs. source data.
- Handled the deployment, go-live and user training content and delivered the project-closure document
- Delivered change requests for Integration of new data sources and enhancements

Achievement: Project delivered with-in 98% schedule compliance with client appreciation

Tech Lead for .NET Development
Client Name: SABMiller South Africa
Oct 2011 – July 2013
Roles and Responsibilities:

- Technical Project Manager - Oct 2011 – Feb 2013

- Solution Designer - Mar 2013 – July 2013

Senior .NET Developer
Client Name: SABMiller South Africa
Oct 2008 – Sep 2011
Project: Supply Chain planning application development and BI reporting
Tools: C#.NET 2.0, ASP.NET 2.0, MS AJAX, ASP, JavaScript, VB6, SQL Server 2000/ 2005, DTS / SSIS / SSRS, ASP.NET 2.0 and QlikView
Roles and Responsibilities:

- Senior .NET developer

.NET & SQL Developer
Sep 2006 – Oct 2008
Tools: ASP.NET 2.0, C#.NET, JavaScript, AJAX, SQL Server 2000/2005, Windows XP/2003 Server, IIS 5.0/6.0
Roles and Responsibilities:

- Team member in multiple in-house and .NET application development projects
- Client: Nihilent
  - Peer To Peer Review – P2P Review Web Application (Jan-08 to Sep 2008)
  - Employee Referral portal – ERP Web Application (Oct-07 – June-08)
- Client: SABMiller, SA
  - Goals Tracker Web Application (01-May- 07 to 10-Aug- 07)
- Client: MTN-SA, HPCL, IBA, Demag Cranes
  - LAMAT – Performance Management System (Oct 2006 – Apr 2007)

References
Available on request