



Paul Hansen

Analytics Engineer / Senior BI Developer

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Languages

Afrikaans (Native or Bilingual) English (Native or Bilingual)

Certifications

MCPS: Microsoft Certified Professional
SQL Server 2012 / 2014
Exam 461: Querying Microsoft SQL Server 2012/2014

Education

June 1999 to March 2002
UNISA: National Diploma: Information Technology
Part-time studies / Incomplete

1999
Varsity College
Human Resources Management

1993 / 1994
AAA School of Advertising
Marketing Diploma: Copywriting

1991
Sea Point High School

Ideal Role

I offer skills as a senior resource in one of the following roles:

- Senior BI Developer
- BI Team Lead
- Data Architect
- BI Business Analyst
- BI Product Owner
- Senior Data Engineer
- Analytics Engineer

I am able to perform with equal levels of competence across any of these roles.

** I am willing to work in a full-time or contract capacity, either on-site, hybrid or fully remote. **

Ideal Leadership

The leadership styles I work well with are: mentoring/coaching, visionary, analytical, and authentic. My ideal leader will consider more than just data in making and supporting decisions; he or she will have a strong belief in their intuition and possess exceptional situational awareness.

Ideal Culture

My ideal employer will strive to achieve the following tenets of great organizational culture: Align with the values and goals of the organization and its employees. Encourages open communication and collaboration. Promotes work-life balance. Offers fair and equal treatment to all employees. Fosters professional and personal development. Encourages innovation and creativity. Recognizes and rewards hard work. Promotes a positive and inclusive work environment. Has clear ethical standards and a commitment to corporate social responsibility. Provides opportunities for growth and advancement within the company.

Skills

Specific skills are listed under each job role in my work experience section. A high-level summary can be found below.

** Each skill area below has been used in a production environment in the past 12 months

Relational Databases	SQL Server, Postgres, MariaDB
Programming Languages	SQL, T-SQL, Jinja, PL/SQL, DAX, Python 3
IDE	SQL Server Management Studio, SQL Pro (Mac), Navicat, Visual Studio 2022, Visual Studio Code
Infrastructure Mgmt	AWS, Azure, Google Cloud Platform, Debian (physical, Widows Server 2016)
Cloud Data Warehouse	AWS RDS, AWS Redshift, Azure Synapse Analytics, Google Big Query
Data Modeling / ELT	dbt, SSIS, SSAS, AWS Glue, Power Query
Data Visualization	Power BI, Google Data Studio, SSRS
Devops / Dataops	Jira, GitHub, GitLab, Bitbucket, SourceTree, Octopus, TeamCity, dbt

Work Experience: 2013 to 2023

**September 2021 to present:
Senior Business Intelligence
Developer at DealX**

Location: Remote

Core objective: Establish a business intelligence product offering within the DealX front-end web application for insight by DealX customers. DealX is a platform to provide insight on commercial mortgage-backed securities CREFC IRP files (Deal, Bond, Loan, Property, Financial and Watchlist / DLSR / REO Commentary)

My role as the Senior BI Developer involves the following:

- Create a data warehouse architecture to enable source data to be ingested. (Stitch Cloud ELT)
- Assess the performance of various cloud data warehouses (Snowflake, Redshift, BigQuery, Databricks).
- Leverage Snowflake Marketplace for dataset sales
- Identify key metrics and measures for data aggregation in data models (dbt)
- OLAP data modelling using dbt (Data Build Tool)

Financial constraints prevented the eventual use of Snowflake, but the evaluation of Snowflake provided me with valuable learning.

I also explored Azure Synapse Analytics as an operational data store and its efficiency in processing data models using dbt. Similarly, I explored Azure Data Factory, AWS Glue, AWS Data Migration Services and SSIS (SQL Server Integration Services).

Skills

PostgreSQL, Microsoft SQL Server, SQL, dbt, Amazon RDS, Power BI, DAX, Snowflake Jira, Confluence, GitHub, Bitbucket, Octopus Deploy, Metabase, TeamCity, Slack, Solution Architecture, Data Warehouse Design, Database Design

**May 2018 - August 2021
Business Intelligence Team Lead
at xneelo**

Location: Durbanville, Cape Town

xneelo (formerly Hetzner (Pty) Ltd) is the leading web hosting company in South Africa.

As the BI team lead, I lead a team of highly talented engineers and analysts in producing the following outcomes:

- The team utilized PostgreSQL for staging MariaDB transactional data into a fully integrated operational data store (ODS). We implemented Fivetran MariaDB, Mongo, Freshdesk, AWS S3, Jira, Slack, and multiple other connectors to create an ODS consisting of more than 10 disparate data sources (structured, and semi-structured data).
- The team made use of a hybrid DW architecture, combining the Inmon Corporate Information Factory (CIF) with a dimensional model (Kimball Star Schema).
- The ETL solution between source DBs and the ODS was primarily based on the lightning-fast Fivetran cloud ELT offering, which supports various options for data destinations.
- The team also developed custom ELT processes using Python. The overall system architecture at xneelo was based on a microservices architecture. API endpoints were available to extract bulk semi-structured datasets which then had to be manually structured using Pandas data frames. These datasets were written to the ODS using Psycopg2.
- The team would then load a dimensional model (star schema based on Kimball Methodology) from staged models in the ODS. These models were consumed by Power BI.
- Solution success criteria required a maximum of 30 minutes latency between live production data and Power BI end-user data models.
- Power BI reports were deployed as embedded reports with an Azure-based premium capacity workspace to deliver efficient business insight to end users.

Skills

Power BI, ETL Development, PostgreSQL, Talend Open Studio, SSIS, SSAS, Jira, Azure DevOps, Server, MariaDB, Microsoft SQL Server, Slack, Solution Architecture, OLAP Cube, Development, OLAP Cube Modelling, Data Analysis, Data Warehouse Design, Google Data Studio

March 2018 - May 2018
BI Developer at Hansen Business Intelligence (Pty) Ltd

Durbanville, Cape Town

I took time out from corporate in an effort to start my own BI consulting firm.

During marketing efforts to find potential clients, I was invited to apply for the BI Team Lead role at xneelo.

I also used this period to develop practical skills on the Azure data platform.

Skills

Azure Data Factory, Azure SQL Database, Data Analysis, Azure Synapse Analytics

August 2016 - February 2018
Senior Data Engineer at Aculocity

Durbanville, Cape Town

- To assist the business in optimizing its automotive engineering business processes, a data warehouse development team was established in Cape Town. Aculocity is a US-based company.
- Data was loaded using SSIS and Task Factory components (dimension and fact loads)
- SQL Server Analysis Services (SSAS) Tabular was used as the OLAP data model. This data model was consumed by Cognos predominantly, with a view to migrating all reports to Power BI.
- Master Data Services (MDS) was implemented for managing a large bill of materials component list. I lead the implementation of MDS.
- I volunteered to serve as the Power BI product owner, writing and creating training materials and developing proof of concept models.
- I was the senior technical resource for an ERP migration project (S2K to Abas ERP)

Skills

Power BI, Microsoft SQL Server, SSIS, Cognos, SSAS, SharePoint, SSRS, Microsoft Teams TFS, Solution Architecture, OLAP Cube Development, OLAP Cube Modelling, Data Analysis Data Warehouse Design

March 2016 - August 2016
BI Developer at CSG International

Newlands, Cape Town

CSG International acquired Ascade AB.

Ascade was a provider of business operations systems for managing and optimizing business decisions and operations. The company provided interconnect business services for telecom carriers that trade and exchange international voice and data traffic. The company also offered interconnect billing, routing optimization, quality assurance, product portfolio, and trading management software.

I was employed to assess the data warehouse built and designed by Ascade, with a view to integrating the resultant data model into the greater CSG data warehouse.

Skills

SSIS, SSAS, Microsoft SQL Server, Database Design, Database Testing

May 2015 - March 2016
BI Manager (EMS) at Western
Cape Government

Tygerberg Hospital, Cape Town

I was approached by the Director of Emergency Medical Services to join EMS for 12 months to establish a BI competency within the organization.

The outcomes of my 12-month tenure included:

- Recruitment, mentorship and skills development of 5 promising and talented young people from previously disadvantaged backgrounds.
- Architecture, analysis, design, testing, and documentation for the development of an emergency dispatch data warehouse.
- Development of a master data services solution incorporating various WCG systems.
- Development and design of the Western Cape Government data portal (Sinjani) automated dashboard and reporting solution for EMS.

Skills

Microsoft SQL Server, Power BI, Data Analysis, SSAS, SSIS, Solution Architecture, OLAP Cube Development, OLAP Cube Modelling

September 2014 - May 2015
Senior BI Developer at Saratoga

Rondebosch, Cape Town

Saratoga Software offers technical and business experts to work with in-house teams or other vendors to provide software-based solutions.

Project involvement:

- Development of an SSAS tabular data model for an engineering company providing services to Sasol.
- Design and SSIS development of dimension and fact loads for a data model for FinSwitch.

Skills

SSAS, SSIS, Microsoft SQL Server, SSRS, Solution Architecture, OLAP Cube Development OLAP Cube Modelling

June 2014 - September 2014
BI Analyst (Contractor) at
Dimension Data

Mowbray, Cape Town

Dimension Data had been awarded a tender from the Western Cape Government to implement a new, modern emergency dispatch system. I was approached by Dimension Data to provide insight into data warehouse requirements.

I was able to fulfil the requirements of this project at the same time as completing the final deliverables on the previous project.

Skills

SSAS, SSIS, Microsoft SQL Server, SSRS, Solution Architecture, OLAP Cube Development OLAP Cube Modelling, Power BI, Master Data Services

July 2013 - July 2014
Senior BI Developer (Contractor)
at Computacenter

Bellville, Cape Town

Computacenter had been appointed to develop a Student Management System at the University of the Western Cape. The project was behind schedule requiring two additional senior BI resources to join the team.

I was involved in the development of a dimensional model for the Student Intervention System. This involved the integration of student data and student marks data (year marks and exam marks) into an operational data store and staging database.

We resolved extensive data integrity issues across the various environments (source, ODS, stage, and model)

We completed the development of various reports (Excel Power Pivot / DAX) which were embedded via Sharepoint.

We also finalized a few legacy issues with the Student Marks Administration System before completing the project to the point of final sign-off from the Dean.

Skills

SSAS, SSIS, Microsoft SQL Server, SSRS, Solution Architecture, OLAP Cube Development
OLAP Cube Modelling, Power BI, Master Data Services, SQL, T-SQL, Database Design, Data Warehouse Design

For a full work history, please view my LinkedIn Profile at <https://www.linkedin.com/in/paulhansenza/> or visit my website at <https://hansenbi.co.za> to view an interactive CV.