Luis **de Sousa**

DATA, ANALYTICS AND AI CONSULTANT

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Profile

With over 20 years of experience in data and analytics consulting, I specialise in designing and building tailored data solutions for large organisations. My expertise spans data warehousing, integration, analysis, visualisation, and deployment in production environments, with recent experience in developing generative AI solutions. Additionally, I excel in leading cross-functional teams in dynamic settings. I firmly believe in the power of technology to drive sustainable change and am dedicated to problem-solving and fostering collaboration and transparency. I take pride in finding unique and practical solutions to challenges. Outside work, my interests include reading, exercising (CrossFit and running), dancing, exploring note-taking systems, and co-organising user groups.

Professional Experience

Syeop   *Johannesburg, South Africa*

PRINCIPAL CONSULTANT AND DIRECTOR   *May. 2007 - Present*

- I lead high-impact data and analytics initiatives across diverse sectors such as real estate, food and beverage, eduction and banking. My managerial responsibilities encompass prospecting, negotiating, and overseeing business and project management. Additionally, I contribute to team development by recruiting, training, and mentoring staff. My technical expertise includes market analysis, consolidating financial data on cloud platforms, forecasting, and developing Management Information Systems (MIS) architectures.

Skills

Data Engineering and Analytics Expertise

ARCHITECTING END-TO-END DATA SYSTEMS

- Proficient in designing and implementing robust data solutions, including data warehousing, integration, and analytics.
- Skilled in using SQL, R, Python, Microsoft Data Platform, Azure DevOps, DuckDB, MySQL, Google BigQuery, Databricks, Github Actions and FiveTran.
- Experienced in financial data consolidation, market analysis, and forecasting. Strong GIS experience, with expertise in spatial data analysis, geolocation mapping, and integrating GIS data into broader data systems.

Project Leadership and Management

LEADING CROSS-FUNCTIONAL TEAMS IN DYNAMIC SETTINGS

- Demonstrated ability to lead high-impact data and analytics projects across diverse sectors like real estate, food and beverage, and banking.
- Expert in overseeing project scopes, timelines, and deliverables while mentoring and training cross-functional teams.
- Effective in stakeholder management, negotiating contracts, and driving team performance.

Community Engagement and Thought Leadership

LEADING CROSS-FUNCTIONAL TEAMS IN DYNAMIC SETTINGS

- Actively involved in co-organising local data science communities, including Johannesburg R User Group and PyData Johannesburg.
- Regular presenter at conferences, sharing insights on data analytics, machine learning, and cloud technologies.
- Contributor to open-source projects, enhancing knowledge sharing and collaboration within the tech community.

Education

Wits   *Johannesburg, South Africa*

MASTER OF ENGINEERING (MENG) IN SOFTWARE AND INFORMATION ENGINEERING   *2015*

- Investigation Report: Using agile principles during software procurement in build versus buy decision-making.

User Groups

Johannesburg R User Group
Johannesburg, South Africa

Co Organiser
2018 - present

- This group serves as a platform for sharing knowledge, networking, and promoting the use of R in various statistical, data analysis, and programming endeavors within the Johannesburg area. https://www.rusergroup.co.za

PyData Johannesburg
Johannesburg, South Africa

Co Organiser
2023 - present

- This local chapter of an international initiative focuses on nurturing community growth and engagement through Python and data science topics tailored to Johannesburg. https://www.pydata.co.za

Presentations

A full list of my technical presentations can be found on Sessionize.

Data and AI Community Day
Johannesburg

Building a RAG Application with Azure OpenAI and Microsoft Fabric
2024

AI/ML and Data Infusion Roadshow
Durban

Deploying a LLM with Vector Search in Databricks
2023

Data Saturday
Cape Town, Durban, Johannesburg

Gently Exploring the Azure Databricks Lakehouse
2023

R User Group
Johannesburg

Key Insights for Data Scientists from Microsoft Build
2023

R User Group
Johannesburg

Databricks for R developers
2023

Consulting Projects

Education

AI and Data Engineer
2024

- As a senior data consultant, I designed and implemented data solutions on Azure Synapse Analytics and Microsoft Fabric. Built a Retrieval Augmented Generation (RAG) database AI solution using Azure OpenAI and Python to enhance student support through data-driven insights.

Financial Services

Data Capacity Services
2024

- As a senior data consultant, I designed and implemented a credit risk analysis process for a loan book. This project involved using R for data management and advanced analytics, yielding critical insights into the loan portfolio's performance and risk metrics.

Policy and Advocacy

Data Capacity Services
2024

- As a senior data consultant, I created data structures that allowed researchers to analyse South Africa's property markets. I used DuckDB for data management and R for spatial analysis to generate insights across national and metropolitan areas.

Real Estate

Consolidated Financial Warehouse
2023

- As part of a two-person senior consulting team, we created and implemented a unified overview of the company's financial performance across all its entities. We used financial systems like Xero, JDE, and LOB applications. For this project, we employed FiveTran for data integration, BigQuery for data storage and analytics, Looker Studio for data visualisation, and Google Sheets for data sharing and collaboration.

Health and Fitness

Databricks Proof of Value
2023

- As a senior consultant in a two-person team, I co-engineered and implemented a Databricks solution in the cloud for both development and production environments. This project involved using technologies such as Azure Databricks, Azure Data Lake Storage Gen2, Azure DevOps, KeyVault, Data Factory, and PowerBI.

Food and Beverage

Forecasting Capability Building
2021-2022

- As the project lead and senior consultant on a two-person team, we developed and implemented an automated statistical forecasting system for SKUs within a valuable supply chain. For this initiative, we used R and Microsoft SQL Server.

Banking Innovation

MIS SOLUTIONS ARCHITECTURE   *2010-2020*

- As the lead and senior consultant for a five-person team in the innovation business unit, I managed all Management Information. My responsibilities included reporting and analytics for various payment systems like domestic and cross-border remittances, e-wallets, mobile payments, and banking transactions conducted via the Internet, apps, ATMs, and USSD. I also oversaw the integration of third-party systems, point-of-sale devices, prepaid services, and transit products. Analysed geospatial data to enhance insights into customer behavior and transaction patterns. Our efforts extended to regulatory reporting, fraud analytics, sanctions screening, and performance monitoring. We developed, maintained, and updated a data warehouse utilising the Microsoft Data Platform, employing technologies such as Microsoft SQL Server, Integration Services, Analysis Services, Reporting Services, and R.

Entertainment

SOFTWARE PROJECT LEAD   *2007-2010*

- I played a crucial role in supporting and revamping a royalty calculation engine. This pivotal project involved developing a C# front-end to manage complex financial processes seamlessly integrated with the SAP ERP system. We utilised the Microsoft Data Platform and leveraged Microsoft BizTalk for seamless integration.

Accreditation Courses

2024	Talend Data Health Explorer	*Talend*
2024	Solutions Architect Essentials	*Databricks*
2023	Generative AI Fundamentals	*Databricks*
2023	Azure Databricks Platform Architect	*Databricks*
2023	AWS Partner: Cloud Economics Accreditation	*AWS*
2023	Databricks Platform Administrator	*Databricks*
2019	RStudio Professional Administrator Certification	*R Studio*
2018	R Software Fundamentals with Applications to Statistical Analyses and Modelling	*Wits*
2009	CMMI-DEV for Systems Acquirers Workshop	*ISACA*
2009	Accelerating Process Improvement	*ISACA*
2009	Acquisition Supplement for CMMI V1.2	*ISACA*
2009	Introduction to CMMI V1.2	*ISACA*
2009	TOGAF 9 Foundation and Certified (Level 1 and 2)	*The Open Group*
2004	Implementing Data Protection on Dell Storage - IDPDS	*Dell*
2004	Implementing Dell Enterprise Storage Solutions - IDESS	*Dell*

Certifications

A full list of my certifications can be found on Accredible, Credly and MSLearn.

2024	Azure AI Engineer Associate	*Microsoft*
2024	Fabric Analytics Engineer Associate	*Microsoft*
2023	Databricks Certified Data Engineer Associate	*Databricks*
2023	Databricks Certified Data Analyst Associate	*Databricks*
2022	Azure Data Engineer Associate	*Microsoft*
2022	Power BI Data Analyst Associate	*Microsoft*
2022	All Microsoft Fundamentals Certifications, 8 exams	*Microsoft*
2021	Microsoft Office Specialist: Expert (Office 2019), 5 exams	*Microsoft*
2017	SAFe Agilist (SA)	*Scaled Agile*
2011	IASA Architect CITA-F (Foundation) Core	*IASA Global*
2006	CompTIA CTT+ Classroom Trainer	*CompTIA*
2006	Microsoft Certified Trainer (MCT)	*Microsoft*
2005	LPI (Linux Professional Institute) 101	*LPI*
2002	Server+	*CompTIA*
2002	Network+	*CompTIA*
2002	A+	*CompTIA*

Retired Certifications

2009	Microsoft Certified Technology Specialist	*Microsoft*
2009	Microsoft Certified Technology Specialist - Microsoft Forefront Client and Server, Configuration	*Microsoft*
2008	Microsoft Certified Systems Administrator (MCSA) Windows 2003	*Microsoft*
2007	Certified Wireless Network Administrator (CWNA)	*CWNP*
2006	Microsoft Certified Desktop Support Technician (MCDST) Windows XP	*Microsoft*
2005	Microsoft Certified Systems Engineer (MCSE) Windows 2000	*Microsoft*
2005	Microsoft Certified Database Administrator (MCDBA) SQL Server 2000	*Microsoft*
2003	Microsoft Certified Professional	*Microsoft*
2003	Microsoft Certified Systems Administrator (MCSA) Windows 2000	*Microsoft*
2003	Cisco Certified Network Associate (CCNA)	*Cisco*