Curriculum Vitae

Dr. Derek A. Colley

Ph.D, M.Sc., Pg.Dip., PgCHPE, B.Sc. (Hons)

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17+ years of experience | Data engineering, architecture, consultancy, administration, leadership
Manchester-based, can travel, on-site/hybrid/remote | No visa requirements

About

Derek Colley is an experienced data professional, expert in database administration (MS SQL Server, Oracle, PostgreSQL and MySQL), data architecture, SQL and BI development (T-SQL, PL/SQL, ANSI-SQL, BIML, ADF, SSIS, SSAS, SSRS, Power BI, etc.), data engineering (ETL in AWS and Azure stacks) and data analysis (SQL, Python, SPSS, etc.). A roving data itinerant on the hunt for interesting and complex problems to be solved, he has worked for UK and international clients and his prominent achievements include repeated senior leadership of data-oriented business units, building data teams and platforms from the ground up, multiple in-flight migrations of enterprise systems on-premises to cloud, design, construction and delivery of complex data warehouses for high-profile clients, and expert consultancy delivering hands-on improvements to enterprise data infrastructure.

Formerly of the IBM graduate programme, in the last two decades Derek has amassed extensive experience ranging from start-up and scale-up businesses to private sector clients to local and national governmental organisations. As comfortable in a suit as he is in a t-shirt, he has outstanding communication skills and is able to adapt his communication style to any audience - C-suite executives, investors, technical specialists or students.

Derek was awarded his Ph.D in relational database performance tuning, for which he invented the technique of query representation using hyperdimensional adjacency matrices and applying this to the PostgreSQL database engine. He is a former author with the prominent trade publication https://www.mssqltips.com, and has presented his industry experience and academic research at various specialist conferences. Passionate about teaching and mentoring, Derek is also a qualified Higher Education lecturer with 4 years of part-time hands-on teaching experience in addition to his extensive supervision of Master's degree students. He is a Fellow of Advance HE and sits on the Editorial Review Board of the IGBIR. If you're read this far, ask him about his book!

Experience

Lead Database Consultant & Managing Director – *Global Technologists Ltd. (Dec. 2023 -)*
Providing specialist data contract/consultancy expertise to consultancy supply chains and end clients.
Website: https://www.global-technologists.co.uk

Data Engineer/DBA – *(Dec. 2023 -) (Contract)*
Providing specialist data engineering, DBA and data consultancy services.

Senior Data Engineer & Technical Lead – *Urbanchain Ltd. (Jun. 2023 – Dec. 2023)*
ETL pipelines, data modelling, data analysis and development, architecture. Leader of a team of 8.
Tech: AWS RDS, SQL, MongoDB, AWS S3, Python, AWS Lambda, AWS Glue, JIRA, REST APIs, CI/CD, Agile.

Senior Data Engineer (Senior Manager) – *Cognizant Worldwide (Jul. 2022 – Jun. 2023)*
Governance and management, consultant-level technical expertise, architecture. Led a team of 9.
Tech: AWS RDS, Denodo, Pentaho BI, SQL, Qlik, Power BI, MySQL, PostgreSQL, Microsoft SQL Server.

Lead Database Administrator (DBA) – *Lifelong Learning Holdings Ltd. (Jan. 2019 – Jul. 2022)*
> Head of data for UKVI subsidiary. Data architecture, management and governance. Part of a team of 8.
> Tech: Microsoft SQL Server 2019, AWS RDS, MySQL, Power BI, ETL pipelines, AWS Glue, IBM DB2.

Lead Database Consultant & Managing Director – *Optimal Computing Ltd. (Feb. 2011 – Jul. 2019)*
> Various single and recurring client contracts, roles as detailed.

> **Seatriever Ltd.** – **Data Consultant** (May 2019 – Jul. 2019).
>> Retail. P-T/adhoc. Tech: SSRS, Python, reporting, Power BI, analysis.
> **Car Finance 247 – Database Administrator** (Sep. 2018 – Jan. 2019)
>> E-commerce. Tech: Agile, MSSQL, Azure, AWS RDS, DynamoDB.
> **Zuto – Lead Database Administrator** (Apr. 2018 – Sep. 2018)
>> E-commerce. Team leader, 5 DBAs. Tech: MS SQL, AWS RDS, Tableau.
> **Davies Group – Database Administrator** (Jan. 2018 – Apr. 2018)
>> Insurance. Tech: MS SQL, data warehouses, SSIS, SSRS.
> **CGA Strategy – BI Developer** (Oct. 2017 – Jan. 2018)
>> Distribution. Tech: MS SQL, SSAS, DAX, cubes, warehousing.
> **Utiligroup - Data Consultant** (Mar. 2017 – Oct. 2017)
>> Energy (electricity). Tech: MS SQL, Oracle, Python, C#, ETL.
> **Davies Group – Database Administrator** (Sep 2016. – Jan. 2017)
>> Insurance. Tech: MS SQL, data warehouses, SSIS, SSRS.
> **Storengy (Engie)** – **Data Engineer** (Jan. 2016 – Sep. 2016)
>> Energy (gas). Tech: MSSQL, Azure, XML, .NET, SSIS, SSAS.
> **Beauty Bay** - **Database Administrator** (May 2016 – Aug. 2016)
>> Retail. Tech: Dynamics CRM, Azure DB, MS SQL, ETL.
> **Optima Consultancy – Systems Consultant** (Dec. 2015 – Apr. 2016)
>> Finance. Tech: Python, ETL, MS SQL, SSRS, Power BI.
> **Utiligroup – Data Consultant** (Sep. 2015 – Dec. 2015)
>> Energy (electricity). Tech: MS SQL, Oracle, Python, C#, ETL.
> **Ascribe (EMIS Health) – SQL Consultant** (Jun. 2015 – Sep. 2015)
>> Healthcare. Tech: MS SQL, DBA work, T-SQL.
> **TDX Group – Database Administrator** (Sep. 2014 – Jun. 2015)
>> Fintech. Tech: MS SQL, architecture, T-SQL, SSIS, SSAS, SSRS.
> **TSYS Managed Services – Database Administrator** (Jun. 2014 – Sep. 2014)
>> Technology. Tech: MSSQL, Oracle, T-SQL, PL/SQL.
> **Davies Group – Database Administrator** (Apr. 2014 – Jun. 2014)
>> Insurance. Tech: MS SQL, data warehouses, SSIS, SSRS.
> **G4S Care & Justice Services – Database Administrator** (Jan. 2014 – Apr. 2014)
>> Security. Tech: MSSQL, Oracle, DBA, analysis.
> **Chester West & Cheshire Council – Database Administrator** (Sep. 2013 – Jan. 2014)
>> Local government. Tech: MSSQL, SCOM.
> **Middlewich High School – Systems Engineer** (Nov. 2013 – Dec. 2013)
>> Education. Tech: SQL, general IT, SIMS, networks.
> **Salford Royal NHS - Field Engineer** (Feb. 2011 – Aug. 2011)
>> Healthcare. Tech: Oracle, HP Openview, field engineering.

Database Administrator – *Laterooms Group Ltd. (Sep. 2012 – Sep. 2013)*
> One of two DBAs with a market-leading hotel and travel booking service.
> Tech: Microsoft SQL Server, Power BI, SQL Server Integration Services, SSRS, SSAS, cubes, DAX.

Database Administrator – *Calyx Managed Services Ltd. (Sep. 2011 – Sep. 2012)*
> Sole DBA for a managed service consultancy, clients included the FSB, British Red Cross and others.
> Tech: Oracle 9i & 10g, Microsoft SQL Server, PostgreSQL, MySQL, SOC monitoring, Splunk.

Global Technical Lead, Oracle DBA – *IBM United Kingdom Ltd. (Dec. 2006 – Feb. 2010)*
>   Originally an Oracle DBA, promoted to a Global Technical Lead (cybersecurity).
>   Tech: Oracle 8i, 9i, 10g, INGRES, PostgreSQL, ISO27001 controls, risk management, C#, Python.

Other Projects

Data Engineer – *IBM United Kingdom Ltd. (Dec. 2022 – Jun. 2023)*
>   Secondary contract support (inside IR35) as Data Engineervia IBM.
>   Tech: AWS RDS, AWS CloudFormation, CI/CD, Azure DB, Azure Data Factory, T-SQL, ANSI-SQL.

Lecturer, Module Leader & Senior Research Fellow – *Staffordshire University (Sep. 2019 – Aug. 2023)*
>   Part-time lecturing, marking and supervision. Built a 3-layer data warehouse for an NHS project (Azure).
>   Also provided specialist data analysis and visualisation for the Royal College of Podiatry.
>   Skills: Small- and large-group teaching, stakeholder comms, attention to detail, multitasking.

Tutor – *OpenClassrooms (Jan. 2023 – Jun. 2023)*
>   Part-time remote teaching and supervision to a variety of international students.
>   Tech: Python, SQL (PostgreSQL).

KS2-KS4 Tutor – *Self-employed (Jan. 2018 – Nov. 2020)*
>   Part-time one-to-one and small-group teaching for ages 7+ to GCSE. Maths, English, the sciences.
>   Skills: Communication, planning, teaching. Taught GCSE Computer Science to two students.

Trade Journalist – MSSQLTips.com (periodic, 2017 – 2021)
>   Professional commercial moderated tutorials and tips on popular website https://www.mssqltips.com.
>   Skills: Writing and presenting, Microsoft SQL Server and related topics. Author link.

Education

Postgraduate Certificate in Higher and Professional Education (PgCHPE); Fellow, Advance HE (Jun. 2023)
>   This qualifies me as a teacher within Higher Education institutions in the UK.

Doctor of Philosophy (Computing Science) (Ph.D) (Jun. 2021)
>   Topic: Relational database performance optimisation. I forked and rebuilt parts of the PostgreSQL engine.

Master of Computing (M.Sc) (Jun. 2017)
>   Topic: Improving database security in relational database management systems.

Postgraduate Diploma in Information Security and Digital Forensics (Pg.Dip.) (Sep. 2016)
>   Focus on ISO27001 and related standards; digital forensics, infosec and security risk management.

Bachelor of Computer Science with Honours (B.Sc. with Hons) (Jun. 2006)
>   First degree encompassed multiple modules including software programming, data and so forth.

Professional Certifications

AWS Certified Cloud Practitioner (2022)
Microsoft Certified Professional (SQL Server) (2014)
Oracle Certified Associate (RAC/Streams) (2008)

Directorships and Memberships

Director, Global Technologists Ltd. (Oct. 2023 - Present)
Director, Optimal Computing Ltd. (Jun. 2011 – May 2023)
Director, Think of IT Solutions (UK) Ltd. (Oct. 2015 – Aug. 2017)

Member – Advance HE (formerly the Higher Education Academy) (May 2023 – Present)
Editorial Review Board Member, IGI Global International Journal of Business Intelligence Research
Member in good standing – St. James' Club, Spring Gardens, Manchester
Fellow of Advance HE (2022)

Publications

Colley, D. and Asaduzzaman, M., 2022. *An improved method of delta summation for faster current value selection across filtered subsets of interval and temporal data*. arXiv preprint arXiv:2211.05896. Link

Colley, D., 2021. *Development of a Dynamic Design Framework for Relational Database Performance Optimisation.* Doctoral thesis. Staffordshire University. Link

Colley, D. and Asaduzzaman, M., 2021. *Construction and Performance Analysis of a Groomed Polarity Lexicon Derived from Product Review Source Datasets.* 11th International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS 2021), pp. 875-880, doi: 10.1109/IDAACS53288.2021.9660838. Link

Colley, D. and Asaduzzaman, M., 2021. *A Novel Method for Calculating Query Hashes for Improved Query Grouping in Relational Database Management Systems.* Springer Nature - Book Series: Transactions on Computational Science & Computational Intelligence (and 21st International Conference on Information and Knowledge Engineering). In press. Link

Colley, D., Stanier, C., and Asaduzzaman, M., 2020. *Investigating the Effects of Object-Relational Impedance Mismatch on the Efficiency of Object-Relational Mapping Frameworks*. Journal of Database Management, vol. 31, issue 4. Link

Colley, D., Stanier, C. and Asaduzzaman, M., 2018. *The Impact of Object-Relational Mapping Frameworks on Relational Query Performance.* International Conference on Computing, Electronics & Communications Engineering 2018 (ICCECE '18). Link

Colley, D. and Stanier, C., 2017. *Identifying New Directions in Database Performance Tuning*. Procedia Computer Science, vol. 121, pp.260-265. Link

Colley, D., 2018. *Improving Database Security for Relational Database Management Systems*. Master's thesis, Open University, UK. Link

Colley, D., 2006. *An Improved Image Recognition System for use in Bomb-Disposal Robotics.* Bachelor's dissertation, Brunel University, UK. Link

+ 32 trade press articles for mssqltips.com: Author link

Languages

English (native)
French (limited)

Excellent references available on request.