Renjie Liu

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Data Engineering • Business Intelligence • Process Automation

Summary

Data engineering professional with 15+ years of experience driving data initiatives, modernizing legacy reporting processes, and leading high-impact automation projects for global organizations. Skilled at translating complex requirements into reliable data pipelines and scalable analytics. Proven ability to apply deep SQL expertise, collaborate with cross-functional teams, and deliver solutions that reduce manual effort and facilitate decision-making.

Skills

- **Databases & Languages:** SQL, Python, SQL Server, Oracle, PostgreSQL, MySQL, C#
- **BI Tools:** Power BI, SAP Business Objects, Tableau, Crystal Report
- **Other:** Data Engineering, ETL/ELT, Requirement Analysis, Project Management

Experience

Senior Business Intelligence Consultant
United Nations Headquarters (Consultant), September 2015 - Present

- Rebuilt a multi-step manual reporting process by rebuilding data-collection steps, streamlined the process, and automated the workflow with Python and SQL; reduced delivery from 3 weeks to 3 days.

- Reverse-engineered a legacy Excel-based reporting process and rebuilt it with SQL stored procedures and Python automation; shortened delivery time from 3 days to 15 minutes

- Automated a manual Crystal Reports process by using the SDK and built a GUI with C# to burst hundreds of reports for entities to use; reduced the efforts from 5 days to 20 minutes

- Identified bottlenecks of data pipelines, rewrote the logic with performance tuning techniques, such as index seeking, partitioning; reducing execution time from 20 minutes to 5 seconds.

- Created a proactive profiling and exception-alert process for repeating data failures; reducing turnaround time by establishing an effective feedback loop.

- Discovered inconsistencies across multiple data sources and redesigned the data pipeline; adding validation layers before data hits development, to eliminate recurring outliers in the workflow.

- Built a modular data-validation template that standardized checks across hundreds of HR datasets; improving data trust and reducing repetitive manual validation.

- Mentored junior anaysts through hand-on issue fixes; leading them with Data Warehouse best practices; the team later solved similar issues independently.

Technical Analyst

PepsiCo (Infosys), March 2013 - September 2015

- Collaborated with cross-functional teams and vendors to clarify business requirements, translating them into actionable technical specifications; ensured accurate application implementation.

- Established SLAs with business partners and vendors to streamline delivery expectations; improved on-time reporting performance to 90%+ consistency.

- Integrated data from SQL Server, Oracle, and flat file-based operational trackers into a unified SQL Server reporting repository; provided stakeholders a single source of truth of reporting.

- Rewrote legacy scripts that looped through datasets; partitioning database tables; reduced workflow runtime from 25 minutes to 20 seconds.

- Managed day-to-day work for the offshore team and delivered project status updates to stakeholders; prevented miscommunication and kept deliverables on track.

Business Intelligence Engineer

Infosys Limited, August 2009 - March 2013

- Delivered a full reporting solution, from semantic modeling to reporting creation; ran training sessions and provided hypercare support so users could adopt the reports with minimal friction.

- Leveraged BusinessObjects SDK to build monitoring scripts that tracked failed report executions; enabled proactive fixes and improved reporting reliability for end users.

- Executed system-wide performance tuning on complex tables joins by applying materialized views, table partitioning, and bitmap indexes; significantly improved query speed and report responsiveness.

- Automated manual user-configuration workflows by developing scripts that cleaned and validated input files; reduced setup time from several hours to under 30 minutes.

Professional Development

- Google Data Analytics Certificate
  Coursera, March 2022

- Google Project Management Certificate
  Coursera, April 2021

Education

Geography Information System (B.S. Degree)
Shanghai Normal University, China
September 2005 - June 2009