SEAN LUKA GIRGIS

Senior Data Engineer | Capacity & Infrastructure Optimization

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CORE COMPETENCIES & EXPERTISE

Data Engineering

- Python (Pandas, Generators), SQL, PySpark, ETL Pipelines, Data Warehousing (Snowflake/Redshift).

Cloud & Infrastructure

- AWS (S3, Glue, Athena), Hive/Hadoop, Docker, Linux/Unix, Capacity Planning.

High-Performance Compute

- C++, Java, Multiprocessing, Oracle RAC, Prop*C, OCCI, Low-Latency Systems.

PROFESSIONAL EXPERIENCE

CITI
Nov 2017 – Dec 2025

Senior Capacity & Data Engineer

- **Automated ETL Pipelines:** Architected ingestion pipelines using **Python** and **Pandas** for P95 performance telemetry from 6,000+ endpoints (**BMC TrueSight/TSCO**), replacing manual Trenda processes.
- **Data Strategy:** Designed and optimized **Oracle Database** schemas for historical data retention, enabling long-term trend analysis and seasonal risk forecasting.
- **Predictive Modeling:** Developed **ML-driven forecasting models** using Prophet and scikit-learn to predict infrastructure bottlenecks 6 months in advance.
- **Unified Reporting:** Integrated disparate data feeds (CSV, Excel) into a unified **Oracle** reporting framework, providing executive dashboards.
- **Cost Optimization:** Identified underutilized patterns through data mining, leading to significant hardware consolidation.

G6 HOSPITALITY LLC
Mar 2017 – Nov 2017

Performance Engineer

- Managed end-to-end monitoring for Brand.com using Dynatrace AppMon and Synthetics.
- Led the "FAST" project, data mining user performance metrics to optimize critical money-generating systems.
- Supported cloud migration to AWS, evaluated mobile monitoring tools, and delivered before/after dashboards.
- Optimized large-scale DynaTrace installations, resolving complex issues in high-stakes financial services environments.

HCL / ENTERGY
Jan 2017 – Mar 2017

APM Consultant

- Supported enterprise-wide CA APM, CEM, and ADA solutions for utility grid systems.

CA TECHNOLOGIES

Senior Consultant

- Led enterprise CA APM implementations and upgrades (v9.1 → v10.1) for financial clients (4,000–6,000 agents).
- Designed custom dashboards, alerts, reports, and Perl/Ksh data-extraction scripts to deliver actionable insights.
- Provided architectural sizing recommendations and optimized agent/Enterprise Manager installations.

ENTERPRISE IRON (TIAA-CREF)

Aug 2011 – Dec 2013

SME for CA APM

- Served as CA APM SME for TIAA-CREF, managing 50+ Enterprise Managers and ~4,000–6,000 agents.
- Designed and implemented custom Management Modules and Perl/Ksh data-extraction scripts.
- Collaborated with IT teams to troubleshoot performance issues in J2EE/WebLogic environments.

AT&T

Aug 2010 – Jul 2011

Performance Test Engineer

- Analyzed performance of J2EE telecom web applications to identify optimal loads and resource bottlenecks.
- Documented key metrics (JDBC connections, threads, memory, CPU, GC) and installed JMX Monitoring.

SABRE

May 2008 – Jan 2010

Senior Systems & Data Migration Engineer

- **Massive-Scale Migration:** Led the data migration of a shopping engine handling **10x the throughput of VISA**, refactoring 200+ MySQL nodes into a high-performance 6-node Oracle RAC cluster.
- **Latency Optimization:** Optimized core transaction processing using **C++ and OCCI**, reducing physical hardware footprint by 95% while maintaining sub-second query latency.
- Built testing framework using CPPUNIT in C++/OCCI/OCI environment.

Computer Science Corporation (CSC)

OCT 2007 – May 2008

Architect/Developer

- Performed UML-based unit design and developed modules for IRS modernization.
- Worked on CICS/MQSeries/XML messaging architecture with VC++ and DB2.

Corpus Inc. (CenturyTel -AT&T)   May 2005 – Oct 2007

Developer / Support Engineer (AMDOCS billing)

- Delivered performance enhancements in billing processes (C/C++/Pro*C/PL/SQL), reducing memory usage 75%.
- Developed and troubleshot Flexible Bill Formatter, EDI interfaces, and Enabler modules.
- Automated system administration (WebLogic/WebSphere) with Korn Shell scripts.

Sprint   2001 – 2005

High Availability Interfaces

- Developed high-availability multithreaded interfaces (C++/POSIX threads/sockets/IPC).
- Improved DB performance 10x via PL/SQL optimizations during PRMS maintenance.

Simplex International - Canada   1999 – 2001

Developer

- Developed interfaces to the time and attendance system using VB6 and VC++.

EDUCATION & CERTIFICATIONS

- **High Diploma: Computer Engineering Technology** - Humber College, Canada
- **Bachelor of Science: Civil Engineering** - Zagazig University, Egypt