

VP, PRINCIPAL Summary

I am highly skilled, growth mindset IT professional having more than 20 years experience mostly in financial industry related with providing advanced data solutions using innovative database technology. Very innovative, creative, great problem solver and have achieved the highest ratings consistently for more than 10 years. Continuously learning, adapting and evolving by overcoming challenges faced during professional career. I am fortunate to be a part of team who has delivered cutting edge products over the years to help our firm and clients. My career philosophy is **4LT(Listen, Learn, Love, Lead and earn Trust).**

Skills

- Deep expertise in designing, developing, implementing and running mission critical systems involving OLTP, OLAP and HTAP workloads
- Extensive experience in building and deploying large scale applications in cloud environment(AWS)
- Deep expertise in advanced data modeling, data management and data governance
- Passionate IT leader to build and lead a very strong team to build, deliver and support world-class product(IBOR) using innovative technology
- Hands-on development/business manager and principal solution architect
- Deep expertise in front office, middle office and back office related business workflows in the financial industry.
- Deep expertise in financial instruments modeling including complex derivative products
- Portfolio and investment management
- Deep expertise in Oracle Exadata, Amazon Redshift, SQL, Python, Java, Apache Ignite, AWS and related technologies.
- Basic Experience in Data Science related technologies e.g. Pandas, Matplotlib etc.
- Agile development methodologies e.g. JIRA
- Quick learner and ability to solve complex business problems
- An active member in multiple working groups to establish data strategy, data governance, data quality and enterprise data architecture (e.g. Business Architecture, Data Architecture, Data Quality working groups)
- Financial instruments valuation and exposure experience
- IT Thought leader and key note speaker at in-memory compute summit in 2017 and 2018

Experience

01/2003 to Current

VP, Principal Company Name i¼ City , State

- Architected and developed an innovative product called "IBOR 1.0" to provide real-time market values, exposures and related analytics using operational data store(ODS). This product has capability to show look-through exposure to complex instruments(e.g. pools, funds, ETF) and exotic derivative products(e.g. total return swap, index future). A game changing product being used very broadly at Wellington by our investors and clients since 2007.
- Designed and developed a data quality reconciliation process to detect, respond and prevent data quality issues in a production environment for a mission critical product.
- Delivered many quality products to production well in time and under budget with very limited number of resources and proactively took ownership to resolve complex problems faced by the team. As a result, I have achieved highest ratings ever possible by my manager for more than 10 years in a row.
- Built a very strong and resilient team(from 4 team members to over 50) to support huge demand for the products developed by my team. I was responsible to develop, deliver and support multiple mission critical applications in production and I positioned my team well to innovate new quality products as well as support existing products in production.
- Led a team to design and develop a product to provide investment performance returns across all financial instruments using innovative in-memory design. This product also provided a unique capability to provide look-through performance for the complex financial instruments at Wellington. The new product improved system performance by huge margin over legacy product and running successfully in production since 2013.
- Led a team to successfully build and deliver a transaction processing system(known as unified transaction system) to represent transactions in a unified format to provide rolled up positions, exposures and performance data to meet emerging business requirements.
- Due to continued success and huge demand of products built by my team, my team was asked to build a next generation IBOR platform. IBOR is a single source of truth for all investment holdings information, providing consistent, timely, and accurate position and exposure information that helps the front office make investment decisions. The IBOR provides both current and historical operational investment data and is used by many financial firms both in middle office and front office. IBOR is a perfect use case which combines both operational and analytical workloads (aka hybrid transaction/analytical processing (HTAP)). IBOR 2.0 is in production since Sep, 2019 in AWS cloud environment using GridGain Ignite in-memory computing platform.
- My team is now working on to build IBOR+ using proprietary technology and database using HTAP architecture. As a principal architect on IBOR+, I designed data model, instrument and transaction meta-models and other key foundational components to build a highly available, reliable and optimized IBOR architecture. IBOR+ is a transaction based system to provide real-time positions, exposures and investment performance data using one unified platform. IBOR+ provides both current and historical(as-of, as-at) data in lighting speed due to very innovative and cutting edge technology. IBOR+ is a foundational data platform to enable tier1 applications to migrate from monolithic architecture to service based architecture.
- Designed, developed, implemented and supporting operational historical data store (ODS) application(>60TB) using Oracle Exadata. The ODS maintains historical positions, exposures and performance data. My team also migrated data and built a data pipeline from Oracle to

Amazon Redshift to provide faster performance for OLAP and time series analysis.

- Designed, developed, implemented fixed income portfolio management tool(FIPMT 4.0) to enable investors to make best investment decisions to return positive alpha for our clients. As a lead database developer, I contributed to solve database slowness problems by tuning complex database queries and improve data modeling to improve overall system performance of the system.
- Designed and developed meta-data using yaml to represent complex business rules and application logic. Developed an automated process to update meta-data in yaml format using Python to improve efficiency and time to market. Integrate metadata with Collibra to show data lineage, data dependency and other related information across multiple applications

12/2001 to 01/2003

Senior Software Engineer Company Name i¼ City , State

As a senior developer, successfully developed and deployed a Commodity Trading System in production. Proactively took ownership and help team resolve a deadlock situation due to a very creative and innovative solution. My primary role was to develop a system using Oracle for the business team to process and manage commodity related orders and transactions.

03/2001 to 12/2001

Database Developer Company Name i¼ City , State

As a core developer, I contributed to successfully build and deploy a system to maintain various agriculture products using Oracle.

01/1998 to 03/2001

Oracle Developer Company Name i¼ City , State

As a junior developer, contributed significantly to develop many products at Fuji Foundation Islamabad, Pakistan. My primary role was to gather business requirements and then work with senior members in the development team to build products using Oracle. I actively contributed in successfully delivery of following products.

- *Hospital Management System*
- *Shares Management System*
- *Asset Management System*
- *Payroll and Personnel Information System*
- *Accounting Management System*
- *Vehicle Management System*
- *Inventory Management System (IMS)*

Education and Training

09/1998

Master of Science : Computer Science And Programming QAU i¼ City

01/2008

CFA Level 1 CFA Institute i¼ City

Some College (No Degree) : Python For Finance UdemY Courses

Certifications

- Certified AWS Certified Cloud Practitioner - 2020
- RLF(Leadership for Life) graduate, Babson College 2018
- Oracle Certified Professional 2001

Additional Information

- I was a key note speaker at in-memory computing platform in 2017 and 2018 to share my experience about IBOR at Wellington. Slides and my talk is available at following links.
- <https://www.incsummit.org/2018/us/session/optimized-memory-ibor-architecture-cloud-environment-using-apache-ignite>
- <https://www.incsummit.org/2017/us/sessions/implementation-investment-book-record-ibor-using-apache-ignitegridgain>