

Roy Yang

Data-driven Senior Manager / Data Scientist with over 15 years of experience in banking and insurance, including 9+ years applying analytics, AI, cloud platforms, and executive reporting to improve acquisition, risk management, liquidity optimization, and profitability.

Experienced in Python, SQL, Azure/GCP, Power BI, ML forecasting, customer segmentation, and stakeholder engagement across front-office, risk, and treasury teams.

EXPERIENCE

Data Scientist, Group Treasury

— *AIA Company Limited (secondment by Protiviti), HK*

Sep 2022 - PRESENT

- **Reduced manual liquidity reporting effort by approximately 90% and shifted reporting cadence from monthly to daily by redesigning and automating Liquidity Assessment reports (LQA);** insights delivered directly to C-suite via Azure-backed pipelines and an interactive dashboard integrating Bloomberg and internal systems.
- **Led a strategic AI initiative to create a unified cash-flow forecasting platform** across 18 Asia-Pacific markets, giving senior management one dashboard for balances and inflow/outflow forecasts; Integrated machine learning cash-flow forecasting models that reduced error (sMAPE) from approximately 90% to 40%, improving forecast reliability for decision-making. Managed rollout, established monitoring controls, and automated reporting.
- **Increased Treasury profit by developing an optimal cash model on the liquidity analytics platform** that estimates required operating cash and minimum balances, enabling significant surplus cash to be redeployed into investments and generating measurable annualized incremental investment income.
- Served as project lead for data analysis and system integration, collaborating with multiple business units to implement analytical strategies and build treasury risk management tools.

Business Strategy Manager, Global Corporate Banking

— *Bank of China (Hong Kong) Limited, HK*

Jan 2017 - Sep 2022

- **Reduced risk-weighted assets (RWA) by >20% within targeted corporate banking portfolios while delivering double-digit profit growth** through large-scale deep-dive analyses combining ML and big-data techniques to build quantitative models and data-driven business strategies.

CONTACTS

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PROJECTS

> Machine learning forecasting models:

- Developed models for predicting deposit and loan volumes segmented by product type, department, and client profiles.
- Forecasted income by type (interest and fee income) across various products, departments, and divisions.
- Optimized budget planning and enhanced profitability through data-driven financial forecasting.

> Client data projects:

- Utilized machine learning for customer segmentation, behavior analysis, and feature analysis.
- Built models for sales and marketing campaign optimization, product recommendations, and client profiling.

> Liquidity assessment report:

- Remodeled liquidity calculations for improved accuracy in liquidity measurements.
- Integrated Bloomberg data and connected multiple internal systems through Azure cloud and databases.
- Designed an interactive Power BI dashboard for real-time portfolio liquidity insights and strategic decision-making.

> Business analytic dashboard:

- Developed a comprehensive, interactive dashboard for senior executives to monitor key business metrics (income structure, product volume, financial ratios, etc) across multiple dimensions.
- Provided insights into departmental performance, customer segmentation, and financial metrics to support strategic planning.

- Influenced strategic entry into 3 new emerging industries by producing industry-level research, market-trend analyses, and competitor benchmarks for senior leadership.
- Achieved >90% adoption among senior managers for a Power BI executive dashboard tracking income structure, product volume, and key financial ratios across business lines.
- Built ML models for customer segmentation, campaign optimisation, product recommendation, and client profiling; forecasted deposit/loan volumes and income by product, department, and division.

Senior Officer, Middle Office Personal Banking — Bank of China (UK) Limited, London

Feb 2013 - Oct 2015

- Managed projects to integrate and implement the core banking system, internet and telephone banking system, coordinating efforts across IT teams in Europe and China.
- Executed project management tasks including User Acceptance Testing (UAT), risk assessment, and budget forecasting.
- Built a cross-selling database and conducted quantitative data analysis to identify business opportunities in personal and corporate banking.
- Monitored and improved the system capabilities and staff competencies. Developed and revised policies and procedures, Terms & Conditions to control risk and meet compliance standard

Associate Relationship Manager, Premier Banking — HSBC, HK

Jun 2010 - Sep 2012

- Achieved profitable growth through value-added financial and investment product sales to high-net-worth (HNW) clients.
- Provided wealth management solutions tailored to individual financial needs, consistently surpassing sales targets.

Personal Financial Manager, Premium Banking — Standard Chartered Bank (Hong Kong), HK

Aug 2009 - Jun 2010

- Managed corporate and personal banking portfolios, advising on investment strategies and acquiring clients and increasing account profitability through targeted financial solutions.

Personal Banker, Personal Banking Department — Citibank (Hong Kong) Limited, HK

Jan 2007 - Apr 2009

- Built and maintained client relationships through tailored financial planning while acquiring new accounts and driving revenue growth via targeted product cross-selling.

➤ Premium persistence model:

- Developed a premium persistence model by applying machine learning to analyze factors like payment methods, policyholder demographics, and product features.
- Enhanced policy retention and profitability through accurate predictive modeling.

TECH SKILL

Programming languages: Python, SQL, R

LLM, machine learning, deep learning: Langchain, PyTorch, TensorFlow, LLM applications

Data analysis, visualization tools: Power BI, Tableau, Excel

Cloud Computing: IBM Watson, Azure, Google Cloud Platform, AWS, Databricks

Statistical packages: SPSS, SAS

Financial terminal: Bloomberg, Wind Financial Terminal

EDUCATION

Master of Science in Computer Science, Financial Computing

The University of Hong Kong |2017-2021

Master of Science in Risk Management Science

The Chinese University of Hong Kong |2009-2011

Bachelor of Science in Biology and Psychology

The University of Western Ontario |2002-2006

LANGUAGES

Fluent in English, Mandarin, and Cantonese