# Yang Ye

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Data Engineer (M.Sc) | ETL | Data analyze| Hadoop| Machine Learning | Spark | AWS | GCP| Python |

#### **EDUCATION**

**University of Limerick**(Fist Honor degree)

September 2022 – September 2023

MSc. Software engineering

BSc. Information management

Limerick, Ireland **September 2014 - June 2018** 

North China University of Science and Technology

Tangshan, China

## **TECHNICAL SKILLS**

Languages: Advanced Python, TypeScript, Java, SQL, NOSQL, HTML5/CSS

Developer Tools: VS Code, MS Visual Studio, IntelliJ Idea, PyCharm, Tableau

**Engineering Stack:** MySQL, PostgreSQL, Machine Learning, Hive, Spark, HDFS, Data Warehouse,

Elasticsearch, MongoDB, Fastapi, React

Others: Agile, Git, MPI, GCP/AWS

# **WORK EXPERIENCE**

#### **SYMBIO (HSBC Contractor)**

Full Stack Engineer

February 2024 – July 2025 *Guangzhou, China* 

## **Data Development Automation Platform:**

Technology stack: Python, Google BigQuery, CI/CD, REST APIs, Confluence

- Architected and developed a Python-based automation platform to streamline the entire data development lifecycle.
- Engineered the tool to automatically generate standardized BigQuery JSON code, ensuring consistency and reducing manual errors.
- Implemented an automated pipeline for deploying to the DEV environment, executing tests, and publishing results directly to Confluence pages for improved transparency.
- Integrated with various internal APIs to automate pre-production release workflows, such as ticket creation and approval requests.

**Key Impact:** Achieved a significant reduction in the data delivery lifecycle, shortening the development phase from **1 week to 1 day** and the production release preparation from **3 days to 1 day**.

# **ERMS (ETL Requirement Management Service):**

Technology stack: FastAPI, React, PostgreSQL, Docker

- Spearheaded the project as **Tech Lead**, guiding a team of 4 engineers through the entire project lifecycle from conception to ongoing development.
- Led the development team using Agile methodologies to facilitate iterative progress, manage tasks, and ensure timely delivery.
- Led key technical decisions, including technology stack selection, system architecture, and database schema design.
- Mentored and provided technical training to new team members, fostering their growth and ensuring code quality.

• Implemented core features including version control for requirements, dynamic approval workflows, data lineage visualization, and an AI assistant.

**Key Impact:** Optimized the requirement lifecycle by streamlining the design process for data modelers and accelerating development for engineers with AI-powered code generation.

## **CLPS (HSBC Contractor)**

February 2021 - May 2022

Data Engineer

Guangzhou, China

## **Teradata – GCP, AWS & Alichoud Migration:**

**Technology stack:** DataStage + SQL + Python + Control-M

- Designed and developed ETL process from Teradata to GCP, AWS and Alicloud.
- Conducted thorough testing and validation of the ETL process to ensure data integrity during the migration.
- Worked closely with stakeholders to define key performance indicators (KPIs)
- Analyzed existing data structures of Teradata and DataStage.
- Monitored daily batch progress of the migration process and handle batch issue.
- Collaborated with technical teams to implement the optimized solutions, which may have included adjusting data transfer methods, utilizing parallel processing, or optimizing SQL queries.

### **Xcheck Middleware:**

**Technology stack:** SQL + Python + JinJa

- Developed a verification tool to resolve health check issues arising from discrepancies in source data or logic.
- Leveraged SQL queries to retrieve data from Teradata and BigQuery

# **HSBC Migration Assis:**

Technology stack: Python

- Converted DDL and SQL to be compatible to new environment.
- Assisted users in migrating their SQL queries and scripts from the original Teradata environment to the new platform.
- Developed a multi-threaded tool for efficient table data transfers.

Meiya Pico

October 2018 - June 2020

ETL Engineer

Guangzhou, China

# Data standardization annotation system:

**Technology stack:** SQL + FastAPI + Pandas + scikit-learn

- Designed a text classification model for data annotation.
- Developed a RESTFUL API endpoint using FastAPI to expose the functionality of the text classification model to external systems.

#### **DATAX extension:**

Technology stack: Java

- Designed and developed ETL extensions tailored to each database's unique data structures, schemas, and data integration needs.
- Developed data cleaning functions for structured and unstructured databases.

Data Analyst

Guangzhou, China

# E-commerce customer behaviors analysis:

**Technology stack:** Python + Pandas + Numpy + POWERBI + SQL

- Understanding Taobao buyers' behavior, including purchase preferences, shopping cart analysis, purchase cycles, and the purchase decision-making process.
- Using Algorithm run analysis on the customer purchase record data from Oracle/mysql/ PostgreSQL to predict the potential customer

# **Merchandise Sales prediction:**

**Technology stack:** Python + Pandas + Numpy + POWERBI

- Perform exploratory data analysis (EDA) to uncover correlations and dependencies between various factors, such as product categories, pricing, promotions, and sales volumes.
- Analyze the revenue from the sale of goods to gain insights into historical sales patterns, trends, and seasonality.
- Based on the analysis results, sellers optimize pricing, inventory management, promotional activities, and product positioning to maximize customer satisfaction and enhance sales efficiency.

## PERSONAL PROJECT EXPERIENCE

Immune cell profiling from single-cell RNA with Neo4J

Github: <a href="https://github.com/MeghanaKshirsagar/ISCBTutorial">https://github.com/MeghanaKshirsagar/ISCBTutorial</a>

- Constructed Seurat pipeline to perform GEO single data Processing.
- Analyzed the gastric dataset by dimensional reduction method and clustering method.
- Leveraged different annotation tools (SingleR,scMRMA etc.) to label the cell types.
- Developed ETL process from Csv files into Neo4j database and wrote Cypher script to validate key biomarker.

#### **CERTIFICATE**

• Oracle Certified Professional

- AWS Certified Developer Associate
- IELTS 6.0

#### **SKILLS**

- Language: Cantonese (Native), Mandarin (Native), English (Fluent)
- Microsoft: Word, Excel, PowerPoint
- Photography and video editing