

# Liangliang Zheng

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## Skills

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**Programming**[proficient]: Python, SQL, Bash [familiar]: Go, C++, Java, Matlab, R, HTML/CSS, JavaScript.

**Dev & ML:** Vim, Git, Docker, Spark, Azure, Cloud Platform, TensorFlow, PyTorch, PowerBI

**Other:** [OS] Linux, Unix, Windows [Office] Excel, LaTeX [Dev] Agile Terminology.

## Employment & Projects

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ING

*Software Engineer*

Amsterdam, the Netherlands

Nov 2022 - Present

### ★ FCC Development in KYC Department

- Developed an alert generation system for an AML orchestration tool.
- Implemented the front-end using Jupyter Hub.
- Deployed and maintained different alert definitions, ensuring compatibility with different alert definition versions.
- Developed automatic testing framework, including azure test plans, functional tests, regression tests.
- Assisted the backtesting and look-back team in investigating alerts.

**Utilized:** Python, Docker, Oracle Database, Liquibase, Git, Jupyter Hub, Ansible

### ★ OLE (Orange Language Engine)

- Engaged in data synthesis, SQL generation DIY projects.
- Built the end-to-end pipeline for data transformation, data synthesis, and data evaluation.
- **Utilized** LangChain, SQL, Gradio, Streamlit. LLM Model: FLAN, GPTJ, GPT-2, Falcon, Mixtral.

Euroclear

*Data Scientist*

Brussels, Belgium

Oct 2020 - Oct 2022

### ★ New Issue Prospectus Extraction

- **Summary: Reduced manual labor by 60 man-days daily by developing prospectus extraction models.**
- Fetched 6 months of training label data from datalake and combined with text data queried from Hbase.
- Built (22/59) models (Categories: Classification, Extraction, Rule based) to extract general, final redemption, coupon fields in the prospectus.
- Integrated evaluation heatmap and report generation functions allowing developers and business side to effortlessly build performance tracking dashboard.

**Utilized:** Python, SQL, Bash, Spark, Git, Hadoop, HBase, Connect-Direct, RandomForest, Bag of Words.

### ★ Anti Money Laundering Graph (AML Graph)

- \* **Summary: Built visualization tool for compliance team to visualize and analyze transaction behaviour.**
- **Entity Resolution:** Built entity resolution pipeline and resolved around 35.3% of all the transaction entities extracted from data lake, write resolved ids back to data lake.
- **Visualization:** Combined resolved ids information and transaction type to build graph nodes and edges, visualizing using pyviz Network.

**Utilized:** Python, SQL, Spark, Git, Entity Resolution, pyviz, Hadoop

### ★ Transaction Monitoring Re-Calibration

- **Summary: Improved internal compliance engine by reducing 9.2% of false positive alerts through dynamically re-calibrating alert threshold.**
- 13 weeks of data ingest to HDFS and replicated the alert detection logic same as in the internal rule-based compliance AML engine.
- Re-calibrated threshold for different segments and risk levels based on historical threshold percentile distribution.

**Utilized:** Python, SQL, Impala, Git, IQR, 3Sigma

## Education

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Vrije Universiteit Brussel

*MSc. Applied Sciences and Engineering: Computer Science (AI)*

Brussels, Belgium

Sep 2018 - July 2020

Hunan Agricultural University

*BSc. Information and Computing Science*

Hunan, China

Sep 2014 - Jun 2018

## Other Projects

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**Clickable Links:** Daily Leetcode & ML, [DL] DeepRL for Stock Trading, Speech Recognition using Deep networks