

Professional Summary

Recent graduate in **software engineering with a finance specialization** from **UESTC**, with language scores of **TOEFL 96, JLPT N2 143**, offering one year of full-time experience as a data analyst at **ICBC Headquarters** and a six-month internship at **KPMG LightHouse**. Skilled in big data analytics, programming, ML, NLP, with familiarity in LLM techniques (data infra, fine-tuning, RAG, CoT), ontology building and other diverse skills. Passionate about advancing **agent-based modeling** and **explainable AI** by integrating **cognitive and linguistic insights** to better capture the latent processes underlying **micro and macro phenomena** in financial and socio-economic systems.

Education

University of Electronic Science and Technology of China (UESTC)

Chengdu, China

BACHELOR'S DEGREE OF ENGINEERING

Sept. 2020 - Jun. 2024

- **Software engineering** with specialization in **Finance**

Curricula

- **Mathematics:** Calculus / Linear Algebra / Probability & Statistics / Discrete Mathematics
- **Computer Science:** Data structure and algorithm / Computer Systems / Computer Architecture / Computer Networks / C++ Advanced Features & Object-Oriented Programming / Artificial Intelligence & Computer Vision
- **Finance:** Econometrics / Financial Derivatives / Accounting

Advanced Course & Thesis Projects

- **C++ Advanced Features & Object-Oriented Programming:** Developed a **micro DBMS** from scratch using C++; Implemented a **syntax parser** based on state transition machines; Built data persistence layer and front-back end communication
- **Artificial Intelligence & Computer Vision:** Developed license plate recognition system combining rule-based methods with **SVM**; Implemented cat-dog classification using CNN
- **Thesis Project: Android-based Niche Collection Management Application:** Designed a **specialized ontology** for subculture fashion items; Developed database schema following standardized data management principles; **Implemented prototype using SQLite and Kotlin** in Android Studio

Skills

Data Science & AI	Statistical Analysis, ML, NLP, DL&LLM
Databases & Big Data	relational DBs, neo4j, Hadoop, Data Visualization, ontology & schema design
Programming	Python, SQL, C++, Kotlin(Java), XML, LaTeX
Others	Visual design, Photography, Composing, Psychoanalysis

Work Experience

Industrial and Commercial Bank of China (ICBC), Headquarter

Beijing, China

DATA ANALYST

July 2024 - Present

KPMG, Lighthouse

Beijing, China

KNOWLEDGE GRAPH DEVELOP ASSISTANT

Dec. 2022 - Jun. 2023

Projects

Anti-Money Laundering System for Certificates of Deposit

ICBC

INTRO: BUILT A TWO-STAGE AML DETECTION SYSTEM COMBINING UNSUPERVISED ANOMALY DETECTION WITH SUPERVISED CLASSIFICATION

- Engineered **graph-based features** in relational DB using **recursive CTEs**, enabling network pattern detection without dedicated graph databases
- Developed 30+ temporal and network features together then **reduced with PCA**, reducing processing time while improving performance
- Created **explainable case analysis methods** for regulators enabling visualization of complex financial relationships for investigation by mapping PCA components back to raw features

Privacy-Preserving Synthetic Data Generation for Cross-Industry Marketing

ICBC

INTRO: DEVELOPED A PRIVACY-PRESERVING SYNTHETIC DATA PIPELINE TO ENABLE SECURE, UTILITY-DRIVEN TRANSACTION DATA

SHARING BETWEEN ICBC AND A LEADING TECH PARTNER TO SUPPORT CROSS-INDUSTRY MARKETING

- Engineered user and merchant features including partner-related transaction labels, demographic segments, and temporal patterns
- Assisted in preparing sequential transaction datasets and configuring input pipelines for **TimeGAN**, supporting the integration of **differential privacy mechanisms** ($\epsilon=0.8$) to enable privacy-preserving generation
- **Validated synthetic data utility** by comparing distributional similarity (Jensen-Shannon divergence) and evaluating predictive model performance across synthetic and real domains

Collaborative Filtering & MBTI-Based Financial Product Recommendation System

ICBC

INTRO: DEVELOPED A RECOMMENDATION ENGINE LEVERAGING USER METADATA AND MBTI PERSONALITY FOR A MARKETING CAMPAIGN,

EFFECTIVELY MITIGATING COLD START PROBLEM THROUGH COLLABORATIVE FILTERING AND MBTI-PRODUCT MATCHING.

- Implemented metadata-based similarity algorithms utilizing demographic and device features to enable **collaborative filtering** even for new users
- Developed MBTI-to-product **affinity mapping rules** converting personality types to financial behavior indicators
- Designed and executed **A/B testing** experiments comparing different approaches, demonstrating that CF+MBTI outperformed pure CF by 18% and traditional rule-based recommendations by 27% in user engagement metrics

Financial Regulatory Compliance Knowledge Graph

KPMG

INTRO: ASSISTED IN DEVELOPING FINANCIAL-LEGAL KNOWLEDGE GRAPH BY BUILDING FINANCIAL REGULATORY ONTOLOGIES AND

COMPLIANCE DOCUMENT LABELING FOR HUAXIA BANK

- Contributed to the design and evaluation of a financial-legal **ontology system**, ensuring alignment of label granularity.
- Collaborated on data preprocessing and **led data augmentation** using ChatGLM
- Assisted in **customizing Jieba** tokenizer with lexicon, later supported experiments with **segmentation-free methods** to enhance robustness and generalizability in entity recognition
- Supported **fine-tuning of FinBERT** models for document and passage-level classification, assisted in ensembling ML and rules to improve performance in edge cases
- Assisted with loading the knowledge base into **Neo4j**, enabling efficient queries

Others

LLM DATA INFRA / FINETUNE / RAG / CoT WORKFLOWS / DAILY WORK

- Curated and structured data to **fine-tune** an LLM for SQL generation, integrated database schema into a **RAG** system, and helped deploying the combined solution on "ICBC Intelligence" platform
- Built a **emotion-cause pair extraction** CoT workflow for customer complaint analysis
- contributed to **3 CNIPA FinTech patent** submissions
- Holistic data support for **120 million** Gen Z customers, designing and maintaining **distributed computational pipelines**

Extracurricular Activities & Leadership

Sub-cultural Fashion Club

UESTC

PRESIDENT

2022 - 2024

Led the club in planning and executing collaborative photoshoots and themed events, coordinating with members and external partners to promote sub-culture fashion on campus.

Rhythm Game Club

UESTC

ADMINISTRATOR

2021 - 2023

Organized and managed multiple rhythm game competitions, overseeing event logistics, participant coordination; Helped new gamers get familiar with arcade games.