TINGYU KUO

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SUMMARY

AI Engineer with 4 years of technical experience bridging data engineering and AI. Specialized in building production-grade data pipelines on Azure Cloud and Databricks, with hands-on expertise in GenAI applications. Proven track record of translating complex requirements into scalable solutions—from architecting ETL pipelines that achieved 13x performance optimization to developing AI-driven prediction market analyzers and cognitive science-based learning algorithms. Proficient in the modern AI engineering stack including Python, prompt engineering, and CI/CD workflows. Currently advancing AI capabilities through experimental projects in sentiment analysis and adaptive learning systems.

SELECTED AI PROJECT EXPERIENCE

Cognitive Science-Based Language Learning App   Present

- Architecting a flashcard application integrating dynamic AI algorithms. Based on Spaced Repetition Systems (SRS) and Active Recall principles to optimize long-term memory retention.
- Translating over a decade of cognitive science research into executable algorithms, creating a custom review scheduling engine.
- Developing interactive testing modules that adapt to user performance, aimed at maximizing vocabulary acquisition efficiency.

AI-Driven Prediction Market Analyzer   Present

- Engineering autonomous AI agents to monitor prediction markets, integrating real-time data pipelines.
- Deployed LLM-based profile simulation and sentiment analysis to aggregate and interpret unstructured data from news and social media, correlating public opinion with market odds.

AI Writing Assistant (suspended due to compliance risk)   2022-2024

- Led the development of a GenAI writing assistant tailored for candidates applying for well-known universities. In addition to product management responsibilities, I actively engaged in prompt engineering and developed an innovative GenAI testing pipeline. Served 25 customers and achieved DKK 75K in GMV.

Master Thesis: Multimodal Visual Attention with Deep Learning   2021

- Transformed a video architecture into a multimodal system by adding audio processing. I built a robust pipeline using Python, TensorFlow, and Google Cloud Platform, and optimized it via Google TPUs and TensorFlow profiling to drive a 24x increase in training efficiency.

WORK EXPERIENCE

Analytics / Data Engineer, Postnord / Copenhagen   Sep 2024 - Present

- Translated complex business logic into production code while managing CI/CD release processes for seamless deployments.
- Modernized reporting architecture by re-engineering legacy logic into optimized SQL on Databricks.
- Orchestrated scalable data workflows via Azure Data Factory to ensure automated and reliable data delivery.

IT Consultant, Capgemini / Copenhagen   Sep 2021 - Aug 2024

Legacy Migration Project in TDC A/S
- Led a dynamic QA team and engineered an automated testing pipeline using Python, significantly reducing manual testing hours and ensuring data accuracy across migrated solutions.
- Spearheaded the migration of 30+ mission-critical legacy reports from T-SQL to Databricks SQL, resulting in modernized data processing standards.

BI Development Project in Essity AB
- Achieved a 13x performance improvement in daily data processing by re-architecting robust ETL pipelines with PySpark, Databricks, and Azure Data Lake.
- Collaborated with analysts to deploy high-impact PowerBI reporting solutions, directly enabling data-driven strategic decisions across the organization.

BI Development Project in Nets A/S
- Engineered a fraud prevention data product currently utilized by major Danish banks, processing high-volume financial transaction data.

Student Assistant, Neurons AI, Copenhagen   Feb 2021 - July 2021
- Cooperated master thesis: using AI to predict human visual fixation on videos.
- Improved existing models by integrating audio information
- Optimised data pipeline and distributed model training by 6x.

Research Assistant, Tsinghua University, Beijing   June 2018 - Apr 2019
- I participated in a joint research project in cognitive science and AI, implementing AI models with Python and authored academic paper.
- Implemented machine learning and predictive models. Visualised data for academic presentation.

Recruitment Consultant, Adecco, Taipei   Mar 2015 - Mar 2018
I specialized in talent recruitment and managed client relationships effectively.
Earned top-performing new employee by achieving the highest sales.

EDUCATION

MSc., IT and Cognition, Copenhagen University

BSc., Psychology, National Taiwan University

KEY SKILLS
- Databricks, Delta table, Spark
- ETL Data Pipeline
- Azure Cloud Stack
- Python, SQL
- Git, CI/ CD

CERTIFICA-TIONS
- Databricks Professional Data Engineer
- Azure Data Scientist
- Azure Data Fundamental
- Azure AI Engineer