Takemaru KADOI

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Technical Skills

- **Programming Languages**: C++ (Advanced), Python (Advanced), Java, JavaScript/TypeScript, SQL
- **Technologies**: AWS, Docker, Git, React/React Native, Apache Flink, Spark, DuckDB, Databricks
- **Financial Systems**: Risk Analysis, Portfolio Management, Data Analytics, Bloomberg Terminal

Education

The University of Texas at Dallas Richardson, Texas

Master of Science in Computer Science *Aug 2022 - Aug 2024*

- Researched software engineering and security topics supervised by Asst. Prof. Kangkook JEE. Officer of UTDallas Computer Security Group (CSG). GPA: 3.8/4.0

The University of Tokyo Tokyo, Japan

Bachelor of Engineering in Electrical Engineering & Computer Science *Apr 2017 - Mar 2022*

- Wrote a bachelor thesis Type- and Sequential Effect-Guided Programming by Example on program synthesis supervised by Prof. Masahiro FUJITA.

Work Experience

Software Engineer I Feb 2025 - Present

Sony Interactive Entertainment *Tokyo, Japan*

- Design and implement **DRM systems** in **C/C++** to protect digital content (games) and enforce license compliance
- Build user interfaces with **React Native** for internal tools and administrative dashboards
- Analyze system and usage data with **Python** and **Databricks**
- Collaborate with cross-functional teams to enhance system reliability and scalability
- Implement **multi-threaded solutions** for performance optimization

Data Engineering Consultant May 2025 - Present

Yoii *Tokyo, Japan*

- Designed and implemented data pipelines applying **Slowly Changing Dimensions (SCD)** to ensure data integrity and historical tracking for financial records with **dbt** and **Prefect**.
- Ensured high availability and seamless updates of the data pipeline by implementing a **blue-green deployment** strategy.
- Developed robust data infrastructure to support financial services, enhancing data reliability for invoice factoring and credit assessment.

Quantitative Analyst Jun 2024 - Jan 2025

Government Pension Investment Fund *Tokyo, Japan*

- Served as quantitative analyst with focus on portfolio management for **200+ trillion** investments
- Led migration of data pipelines to **AWS cloud infrastructure** for automated portfolio monitoring
- Designed and implemented **cloud-based ETL processes** with **Pandas** and **Polars**
- Supported development of quantitative models for **portfolio optimization and risk assessment**
- Created **Streamlit**, **Tableau** dashboards for interactive data visualization and reporting
- Reduced data processing time by **40%** through infrastructure optimization

Selected Projects

- **PyChD: Python Decompiler** - Contributed to research about decompilation of Python code PYLINGUAL paper