

LEE JUNYOUNG

Curriculum Vitae

WORK & RESEARCH EXPERIENCE

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Home Team Science and Technology Agency Enterprise Group - xData

📍 Singapore

Data Scientist (2024.07 – present)

- ✓ Graph network analysis for risk sense-making (2024.07 – present)
 - Designing proof-of-concept implementation of community detection in customized multilayer graph networks
 - Developing feature extraction methods for graph neural network training
 - Technical lead for deployment of a containerized application for customized graph analytics

Infocomm Media Development Authority BizTech Group

📍 Singapore

AI Developer Intern (2024.01 – 2024.05)

- ✓ Benchmarking evaluation system for generative AI (2024.01 – 2024.05)
 - Implemented benchmarking pipeline comparing in-house finetuned LLM to open-source LLMs
 - Developed synthetic QA dataset generation framework for LLM evaluation

Tokyo Institute of Technology Okazaki Laboratory

📍 Tokyo, Japan

Visiting Research Student (2023.07 – 2024.01)

- ✓ Subword tokenization and regularization for machine translation (partially remote, 2023.07 – present)
 - Investigated Korean jamo-level byte-pair encoding for English to Korean neural machine translation
 - Developed a constrained generation method for Korean jamo sequence based on tensor masking
 - Investigating subword tokenization for Jejueo, a critically endangered Koreanic language

Accredify SGInnovate Summation Programme

📍 Singapore

Data Science Intern (2023.05 – 2023.11)

- ✓ Retrieval-augmented generation (2023.05 – 2023.07)
 - Developed retrieval augmented generation-based solution using LLMs for company database querying and customer support chatbot deployment on AWS
- ✓ Management dashboard development (2023.08 – 2023.11)
 - Designed data ingestion pipeline and framework for internal management dashboard on AWS and Tableau

École Polytechnique Fédérale de Lausanne Digital and Cognitive Musicology Lab

📍 Lausanne, Switzerland

Research Intern (2022.05 – 2022.08)

- ✓ Contextual chord embedding (2022.05 – 2022.08)
 - Conducted experiments to develop contextual chord embeddings with symbolic harmonic features via multitask transfer learning

Nanyang Technological University

📍 Singapore

Undergraduate Research Student (2020.12 – 2024.06) • **Research Affiliate** (2024.07 – present)

- ✓ Graph convolutional networks for question Classification (2023.04 – present)
 - Developed phrase feature extraction for graph construction and classification from question text
 - Designing novel graph convolutional network architecture for multi-graph embedding aggregation
- ✓ Teamwork dimensions classification (2022.09 – 2023.07)
 - Finetuned pretrained language model on classroom discussion data for teamwork dimensions for learning analytics system development

