Nattapol Chanpaisit

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EDUCATION

Nanyang Technological University (NTU), Singapore   *Aug 2022 - May 2026*
Bachelor of Engineering in Computer Engineering
- CGPA: 4.65/5.00
- Dean's List AY22/23 (Awarded to top 5% of the cohort in each academic year)
- ASEAN Undergraduate Scholarship

EXPERIENCE

Data Platform Engineering Intern   *May 2024 - Aug 2024*
Agoda.com
- Developed an internal tools for managing S3 storage with low latency, gaining over 30 daily active users
- Optimized file operation latency by 2.4x/4.2x for read/download operation using Go routine worker pool
- Built internal service for managing retention period of data stored in HDFS and Deployed in K8s private cloud

Undergraduate Research Assistant   *Aug. 2023 - Present*
Nanyang Technological University, URECA Program
- Video Generation Benchmark

NLP Research Assistant Intern   *May 2023 - Aug. 2023*
*Institute for Infocomm Research (I2R), A*STAR*
- Supervised by Dr. Huzaifah, Aural and Language Intelligence Department
- Implemented various Positional Encoding techniques (RoPE, ALiBi, Scaled-RoPE) and investigated effects on performance and length generalization in document level translation task
- Investigated on performances of Large Language Models on code-switching translation using various prompt engineering techniques: in-context learning, pivot translation, etc.

PUBLICATIONS

Huzaifah, M., Weihua, Z., **Chanpaisit, N.**, & Kui, W. Evaluating Code-Switching Translation with Large Language Models. In **LREC-COLING**, 2024.

Chanpaisit, N., & Vatiwutipong, P. Parallel Curve Detection Method based on Hough Transform: Discrete and Computational Geometry, Graphs, and Games. In Thai Journal of Mathematics, **TJCDCG3** proceedings, 2021.

ACTIVITIES

ISC24 Student Cluster Competition   *Jan 2024 - April 2024*
- Optimized and Investigated weak scaling of a DFT solver, CONQUEST.
- Analyzed and Identified bottleneck of the application using various profiler (Intel VTune, ARM DDT, and IPM)
- Competing in a Physical Student Cluster Competition in ISC24 conference in Hamburg, Germany
- Attained 3rd place on virtual ISC24 competition on Bridges-2 supercomputer

APAC HPC-AI 2023 Competition   *May 2023 - Oct 2023*
- Won 2nd place overall and HPC special prize
- Optimized the runtime through analysis from Nvidia Nsight profiling; Reduced inter-node communication time in NCCL by 2.6% and investigated runtime of the model with Flash-Attention
- Competition organized by HPC-AI Advisory Council, National Supercomputing Centre (NSCC) Singapore, and National Computational Infrastructure (NCI) Australia

SCSE Club, IT Subcommittee   *Sep 2023 - Aug 2024*
- Built a custom CMS platform for NTU SCSE club's website using Payload CMS

Association of Thai Student Society in Singapore (ATSIS)   *Nov 2022 - Dec 2023*
- Developed an internal website for connecting Thai students and announcing news and events
- see https://www.atsis.org/

Machine Learning and Data Analytics Lab (MLDA@EEE), Industrial Project   *Nov 2022 - April 2023*
- Conducted research on eye-gaze estimation with engineers from *Black Sesame Technologies*
- Increased the robustness and overall accuracy of baseline model by 11.9% with Knowledge Distillation and Similarity Feature Pruning

Projects

GetHouse: Rental Apartment Search Website   *Oct 2023 – Oct 2023*
- Built a website for searching rental apartment based on customizable criteria such as proximity to shopping malls, price, and locations
- see https://github.com/NattapolChan/GetHouse/

MyNinja: Personalised Dashboard for Consignees   *Oct 2023 – Oct 2023*
- :(
- A submission to NinjaVan's CodeDojo hackathon
- see https://github.com/mcbebu/ALTER-TABLE

SaraTree: Achievement based Interactive Learning Platform   *Mar 2022 – Mar 2022*
- Built a platform for interactive lessons with interactive quizzes
- Won 1st prize in education track in HACKVCIS Hackathon
- see https://saratree.vercel.app/

Guitar tab generator   *Mar 2022 – Mar 2022*
- Developed guitar tab transcription system using Short-time Fourier Transform
- Hosted a simple React.js web app to generate guitar tab from input files with integrated Web Audio API
- see https://nattapolguitartab.netlify.app/

Honours and Awards

Silver Medal | 5nd *International Physics Olympiad (IPhO)*   *July 2022*
Bronze Medal | 22nd *Asian Physics Olympiad (APhO)*   *May 2022*
Gold Medal | 16nd *Thailand Physics Olympiad (TPhO)*   *Dec 2020*

Technical Skills

Languages: Python, C, C++, CUDA, OpenMP, OpenCL, SQL (Postgres), JavaScript, TypeScript, Golang
Frameworks: Pytorch, TensorFlow, DeepSpeed, React, Node.js, Next.js, Tailwind CSS, Entgo
Others: Git, Singularity Container, Docker
Certificates:
1) Neural Networks and Deep Learning (Cousera & DeepLearning.AI)
2) Build, Train, and Deploy ML Pipelines using BERT (Coursera & DeepLearning.AI)