

Ching-Cheong Lee

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I graduated from HKUST with an M.Phil degree in Mathematics, worked in both academic and nonacademic fields, with solid knowledge in front-end programming. Passionate about problem solving, which pushes me to expand my technical skills persistently.

Portfolio and Personal Homepage

I keep sharing my blog post as a record of what I have learnt. I also list some of my side projects there:

<https://machingclee.github.io/blog>

Experience

Software Engineer

mid-May 2023 - Present

Wonderbricks Limited

Hong Kong

- Build, revamp and maintain React projects in Typescript.
- Build Mobile Application.
 - **Frontend.** 1 Real-time chat app by socket.io and react-native (with expo-cli) in typescript. 2 Convert voice, image, plaintext into summary presented in excel format via LLM Model API. 3 Create custom interactive UI components using react-native-reanimated.
 - **Backend.** 1 Develop entire backend application from scratch by nodejs, express, socketio, etc. 2 Develop Lambda function in python for LLM summary report excel generation. 3 Research on latest frameworks, persuade by POC and bring to final decision for transiting from MongoDB into PostgreSQL. 4 Containerize the node application and deploy it onto ECS fargate, served by a load-balancer.
- Maintain (haven't tried to init) Springboot project, build APIs using both MySQL and MongoDB.
- Migrate part of the old services from java backend to Serverless Lambda Functions in Python.
- Create automated deployment workflows for frontend and backend via github actions.
- Initiated a documentation frontend project by using Docusaurus to make change records and document every detail of a project that every developer should know.

AI Engineer

mid-Aug 2022 - 04/2023

Eye Catching Limited

Hong Kong

- Help maintain angular project.
- Study eye-tracing related algorithm.
- Study and deploy machine learning algorithm in web-app and desktop-app.

Senior Software Developer

09/2021 - mid-Aug 2022

RaSpect Intelligence Inspection Limited

Hong Kong

- Maintain React Next project.
- Data scrapping of house transaction records, automation on tracking latest rtk-data on geodetics website.
- **AI Related.** Implemented the following using PyTorch.
 1. **Text Detection and Removal.** In order to perform defect classification on signboard, I am responsible to create models for text detection and text removal to remove possible noise that interfere our defect classifier.
 2. **Crack and Rust Detection.** Both using faster rcnn.
 3. **DefectGAN.** Successfully implemented a DefectGAN (no source code available yet in paperswithcode) that creates crack, spalling, etc synthetic data for defect detection.
 4. **Model Integration with Backend.** Exposed clean enough API for software integration.

Software Engineer

09/2020 - mid-08/2021

EAB Systems (Hong Kong) Limited

Hong Kong

- **Frontend Related.** Build video conferencing frontend and backend application in React, Twilio.js and express.js. Build CMS system that lets users create their own single page application.
- **Deep Learning Related.** Build CSV Importer (together with an express layer, a Flask layer and a tensorflow-serving layer) that can parse a csv/excel file and perform:
 1. **Data Classification.** Classify column based on existing data using LSTM model with two dense layers and finally a softmax.
 2. **Auto Date-reformatting.** Based on machine learning model (transformer) that can translate all common form of date into YYYY-MM-DD format.

Data Classification and Auto Date-reformatting are separately two models placed inside tensorflow-serving for deployment.

Front-end Developer

09/2019 - 08/2020

eLearningPro

Hong Kong

- Create HTML5 Coursewares, maintaining web pages and constructing frontend application using React.

Senior Research Assistant

03/2015 - 10/2015

Department of Mathematics, Hong Kong Baptist University

Hong Kong

- Study HJB equations arised in a specific financial games

Research Assistant

09/2014 - 02/2015

Department of Mathematics, Hong Kong University of Science and Technology

Hong Kong

- Study the property of viscosity solution of HJB equations

Education

MicroMaster in A.I. and Programming

03/2019 - 06/2019

Tecky Academy, Hong Kong

M.Phil. in Mathematics

09/2012 - 08/2014

The Hong Kong University of Science and Technology, Hong Kong

B.Sc. in Mathematics (First Class Honor)

09/2009 - 06/2012

The Hong Kong University of Science and Technology, Hong Kong.

Skills

Source Control	<ul style="list-style-type: none"> • Git
Deployment	<ul style="list-style-type: none"> • Docker • Basic CI/CD Pipeline in Gitlab
Cloud (AWS)	<ul style="list-style-type: none"> • Security Group • Target Group • Load Balancer • ECS with EC2 or Fargate • Route53 • S3 • CloudFront • Lambda Functions
Java	<ul style="list-style-type: none"> • Maintain Springboot • Hibernate • MyBatis
C#	<ul style="list-style-type: none"> • Windows Presentation Foundation
C++	<ul style="list-style-type: none"> • CMake Ecosystem • Libtorch • OpenCV • ImGui for Desktop App
Golang	<ul style="list-style-type: none"> • Gin • Goose • Sqlc • Azure-sdk for Voice
Python	<ul style="list-style-type: none"> • Tensorflow v2 • PyTorch • Pandas • Flask • ONNX • Openpyxl • Boto3
Typescript	<ul style="list-style-type: none"> • React • React-Native • Redux • Redux-Saga • Next.js • Electron.js • Electron with Next.js • Node.js • Express.js • Socket.io • Twilio.js • Knex.js • Mongoose.js • Prisma.js • Prisma-Kysely.js
Deep-Learning	<ul style="list-style-type: none"> • Embed custom trained pytorch model in ONNX format into frontend • Implementation from scratch and training experience with CNN such as <ul style="list-style-type: none"> • Object Detection • Text Detection with Rotation • Image Classification • Image Generation and Image In-painting • Implementation and training experience with LSTM Model and Transformer to do: <ul style="list-style-type: none"> • Summarization on a column of data • Translation of random date format into standard YYYY-MM-DD one