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
Wonderbricks Limited　　　　　　　　　　　　　　　　　　　　mid-May 2023 - Present
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 in excel format. [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.

AI Engineer
Eye Catching Limited　　　　　　　　　　　　　　　　　　　　mid-Aug 2022 - 04/2023
Hong Kong

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

Senior Software Developer
RaSpect Intelligence Inspection Limited　　　　　　　　　　09/2021 - mid-Aug 2022
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
EAB Systems (Hong Kong) Limited　　　　　　　　　　　　　09/2020 - mid-08/2021
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 Classsification.** 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-refomatting are separately two models placed inside tensorflow-serving for deployment.

Front-end Developer
eLearningPro

09/2019 - 08/2020

Hong Kong

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

Senior Research Assistant
Department of Mathematics, Hong Kong Baptist University

03/2015 - 10/2015

Hong Kong

- Study HJB equations arised in a specific financial games

Research Assistant
Department of Mathematics, Hong Kong University of Science and Technology

09/2014 - 02/2015

Hong Kong

- Study the property of viscosity solution of HJB equations

Education

MicroMaster in A.I. and Programming
Tecky Academy, Hong Kong

03/2019 - 06/2019

M.Phil. in Mathematics
The Hong Kong University of Science and Technology, Hong Kong

09/2012 - 08/2014

B.Sc. in Mathematics (First Class Honor)
The Hong Kong University of Science and Technology, Hong Kong.

09/2009 - 06/2012

Skills

Source Control	• Git
Deployment	• Docker • Basic CI/CD Pipeline in Gitlab
Cloud (AWS)	• Security Group • Target Group • Load Balancer • ECS with EC2 or Fargate • Route53 • S3 • CloudFront • Lambda Functions
Java	• Maintain Springboot • Hibernate • MyBatis
C#	• Windows Presentation Foundation
C++	• CMake Ecosystem • Libtorch • OpenCV • ImGui for Desktop App
Golang	• Gin • Goose • Sqlc • Azure-sdk for Voice
Python	• Tensorflow v2 • PyTorch • Pandas • Flask • ONNX • Openpyxl • Boto3
Typescript	• 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	• Embed custom trained pytorch model in ONNX format into frontend
	• Implementation from scratch and training experience with CNN such as
	  • 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:
	  • Summarization on a column of data
	  • Translation of random date format into standard YYYY-MM-DD one