Ching-Cheong Lee

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Personal Statement

I graduated from HKUST with an M.Phil degree in Mathematics, worked in both academic and nonacademic fields, and with solid knowledge in front end programming. I am also confident in both software development and AI models development for solving problems in diversified scenarios.

Personal and Portfolio 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 Realtime Chat Application in Mobile by using React-Native in Typescript; Create custom interactive UI component using react-native-reanimated.
- Maintain Springboot project, build APIs using both MySQL and Mongodb.
- Migrate part of the services from java backend to Serverless Lambda Functions in Python.

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 leanring algorihtm 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 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 • ECS with EC2 or Fargate • Route53 • Load Balancer • S3 • CloudFront • Lambda Functions
Java	• Springboot • Hibernate • MyBatis
C#	• Windows Presentation Foundation
C++	• CMake Ecosystem • Libtorch • OpenCV • ImGui for Desktop App
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
Deep-Learning	• Embed custom trained pytorch model in ONNX format into frontend • Implementation from scratch and training experience with CNN such as

Deep-Learning (continued):
- 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