

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://machinclee.github.io/blog>

Experience

Software Engineer

mid-May 2023 - Present

Wonderbricks Limited

Hong Kong

- Build, revamp and maintain React projects in Typescript.
- Build Realtime Application (chat, report generation with realtime status, etc) in mobile by using react-native in typescript; Create custom interactive UI component using react-native-reanimated.
- Build backend in nodejs from scratch to support the mobile application using Express, Socket.io and MongoDB.
- 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 learning algorithm in web-app and desktop-app.

Senior Software Developer

09/2021 - mid-Aug 2022

RaSpec 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• ECS with EC2 or Fargate• Route53• Load Balancer• S3• CloudFront• Lambda Functions
Java	<ul style="list-style-type: none">• 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
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
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