

# Xiaotian GENG

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## EDUCATION

### Columbia University

*M.S. in Electrical Engineering*

GPA:3.8 Coursework: Introction to Databse, Cloud Computing

New York, NY

Sep 2020 - Dec 2022

### City University of Hong Kong

*B.E. in Electronic & Comm Engineering (First Honors Degree)*

GPA: 3.72 Dean's List (4 semesters)

Coursework: Machine Learning, Computer Vision, Data Communications & Networking,  
Computer pogramming based on C++, Data Structures & Algorithms

Hong Kong, HK

Aug 2016 - Jul 2020

## WORK EXPERIENCE

### China Construction Bank, Financial Science and Technology Department

#### Software Development Engineer Intern

Shijiazhuang, CN

Jun 2020 - Aug 2020

- Implemented and delivered stable admin management system for over 7000 internal users in CCB among 5 provinces
- Developed user login verification front end page with HTML & LayUI
- Built users' profile MySQL database for over 7000 internal users
- Implemented user record management module in management system through Mybatis SpringBoot & MySQL to input, store, modify & retrieve users' profile information record

## PROJECTS

### Luv2Code eCommerce App

Dec 2020 - Feb 2021

Luv2Code is a real-time online shopping website providing services for customers to browse products information, create/cancel orders and make payment, which is based on SpringBoot+Angular front and rear separation framework.

#### Backend Development

- Applied SpringBoot+Maven to create and manage project development environment
- Developed JPA entities and JPA Repositories based on project requirements and created REST APIs with Spring Data JPA Repositories and Spring Data REST
- Designed and processed the JSON requests according to different types of modules, actions, and request data
- Wrote MySQL scripts to build and manage database and related tables
- Applied OAuth2+JWT to protect REST API resource

#### Frontend Development

- Applied Angular5 to build whole front-end application
- Created services modules for product searching, shopping cart CRUD, order check out etc. with HTML/HTML5, CSS/CSS3, Bootstrap and TypeScript
- Developed user registration and login verification modules based on Okta SDK and Okta Sign-In Widget

### COVID-19 AI Helper

Jan 2021- Apr 2021

Covid-19 AI Helper is a deep-learning based web application, users can upload individual lung x-ray/CT images to analyze whether or not they are infected with COVID-19 and visualize infected areas.

#### Backend Development

- Implemented VGG16, Inception-V3 and ResNet-50 models with Keras for pneumonia types classification
- Trained and fine-tuned models on 3616 COVID-19 positive lung x-ray images, 16192 Normal healthy lung x-ray images, and 6012 Pneumonia images of other kinds. Optimized networks and achieved classification accuracy = 98.1%
- Implemented U-Net and Res-101-Unet models with Keras for lung infection region segmentation
- Utilized 12.1K CT lung segmentation image pairs to train and fine-tune models. Optimized networks and achieved IOU = 0.36 for ground-glass opacity and IOU = 0.344 for consolidation and total mAP = 0.33

#### Frontend Development

- Utilized Flask micro framework to deploy deep learning models on backend server
- Built Flask RESTful APIs for function models such as image uploading, lung x-ray image analyzing, lung CT image analyzing, result display etc.
- Created GUI using HTML/HTML5, CSS/CSS3

## TECHNICAL SKILLS

Language: C++, Java, Python, HTML, JavaScript, SQL, TypeScript

Framework: Tensorflow, PyTorch, Keras, Flask, Spring MVC, SpringBoot, Bootstrap, Angular5

Tools: MATLAB/Simulink, MySQL, Navicat, Git, Maven, Okta, npm

## LEADERSHIP

### Entrepreneurship Association, City University of Hong Kong

#### Executive Secretary

Hong Kong, HK

Nov 2016 - Jun 2017

- Communicated and cooperated with university board, hosted 7 internal conferences and recorded meeting minutes
- Negotiated with outstanding youth entrepreneurs from 5 countries and held annual entrepreneurship forum at City University of Hong Kong