

LIANG-YU (CHARLES) CHEN

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EDUCATION

Columbia University in the City of New York

M.S. in Computer Science, GPA: N/A

Sep 2020 - Dec 2021 (Expected)

Hong Kong University of Science and Technology (HKUST)

B.E. in Computer Science, GPA : 3.65

Sep 2015 - Aug 2019

First Honors Graduate, 4x Dean's List Award

HONORS AND AWARDS

Cyberport Creative Micro Fund - *Sponsorship of 6500 USD*

Apr 2019

- Built a web application prototype for crypto-currency audit platform in JavaScript and Python

Oracle Thinkquest International Competition - *2nd Runner-up*

Dec 2011

- Constructed a web application in PHP and Javascript to simulate effect of arbitrary garbage disposal via animation

WORK EXPERIENCE

Machine Learning Engineer at Applied Science and Technology Research Institute

Oct 2019 - Jul 2020

Engineering Associate

Hong Kong

- Developed Srace, a software for automated information extraction of traffic accident scene images
- Designed deep learning based weather attribute extraction algorithms to perform 3-class weather classification on image data using Tensorflow and improved accuracy from 82% to 90%
- Implemented a library for Tensorflow C++ tensor operations for Srace deep learning model integration

AI Research Intern at Naver Corporation Headquarter

Jul 2018 - Sep 2018

Summer Intern

South Korea

- Participated in the development of Vincent, an AI agent for automatic advertisement banner generation
- Designed deep learning based ranking algorithms for click-through rate (CTR) prediction and improved the average top-50 CTR from 3.8% to 4.2% for advertisement banner quality control
- Presented analysis of ranking algorithm feasibility at an intra-company conference

PROJECTS

Job Matching Web Application Development - ManbaseHK (Startup)

May 2020 - Aug 2020

- Designed a short-term job registration web application with Flask, JavaScript and MySQL, and helped the company to recruit the first batch of 20 business users

Foreground Removal and Background Inpainting on Nature Scene

Jan 2019 - May 2019

- Built a coarse-to-refine generative model and increased PSNR from 18 to 22 on nature scene image inpainting comparing to traditional iterative algorithms
- Constructed an image editor GUI and integrated various image processing algorithms to the system
- Tracked development progress with Trello; scheduled regular meetings and discussions in Agile style

Grapheme-to-phoneme Prediction Under Low-resourced Environment

Sep 2018 - Dec 2018

- Leveraged phoneme prediction using pronunciation rules to assist non-English speakers with buzzwords
- Designed seq2seq with skip-gram embedding to improve the BLEU score from 0.367 to 0.425

LINE Chatbot Diet Assistant

Sep 2017 - Nov 2017

- Designed an interactive chatbot in Java for nutrition / calories control and meal recommendation
- Improved average request handling speed by 10x using multithreading programming
- Delivered a presentation about features and highlights to an hundred-people class and launched chatbot on LINE

SKILLS

Programming: Python (expert), C/C++ (proficient), Java (Prior), R (Prior), MATLAB (prior), PHP (prior)

Machine Learning: NLTK, Pandas, Numpy, Scipy, Tensorflow, Pytorch, Keras, Scikit-learn, NSML (Auto-ML)

FrontEnd / UI: JavaScript, HTML Jinja2, CSS, Qt, PyQt

Database & others: MySQL, MongoDB, Git, LaTeX, Linux Programming

RELEVANT COURSES / KEYWORDS

Artificial Intelligence, Deep Learning, Machine Learning, Computer Vision, Natural Language Processing, Algorithm, Image Processing, Software Design, Software Development, Web Application