LIANG-YU (CHARLES) CHEN

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Education

Columbia University in the City of New York *Sep 2020 - Dec 2021 (Expected)*
M.S. in Computer Science, GPA: N/A

Hong Kong University of Science and Technology *Sep 2015 - Aug 2019*
B.E. in Computer Science, GPA : 3.65
First Honors Graduate, 4 times Dean's List Awards

Keywords

Machine Learning, Computer Vision, Natural Language Processing, Data Structure and Algorithm, Software Development

Honors and Awards

Cyberport Creative Micro Fund - *Sponsorship of 6500 USD* *Apr 2019*
- Built a web application prototype for crypto-currency audit platform in jQuery and Python-Flask.

Oracle Thinkquest International Competition - *2nd Runner-up* *Dec 2011*
- Constructed a web application in PHP and jQuery to simulate outcomes of garbage disposal via photoshop animation.

Work Experience

Full Stack Engineer at Manbase (Startup) *Aug 2020 - Now*
Co-Founder *Remote / Hong Kong*
- Designed and developed a job matching web application with jQuery, Python-Flask and MySQL, and assisted the startup to recruit the first batch of 20+ business users.

Machine Learning Engineer at Applied Science and Technology Research Institute *Oct 2019 - Jul 2020*
Engineering Associate *Hong Kong*
- Improved the 3-class weather classification accuracy of Srace, a software for information extraction of traffic accident scene images, from 82% to 90% via deep learning based weather attribute extraction.
- Accelerated software integration progress by implementing a C++ Tensorflow tensor operation library to allow for easier access by other team developers.

AI Research Intern at Naver Corporation (Headquarter) *Jul 2018 - Sep 2018*
Summer Intern *South Korea*
- Designed deep learning based ranking algorithms in Pytorch for click-through rate (CTR) prediction and improved the average top-50 CTR from 3.8% to 4.2% for advertisement banner quality control, and presented analysis of algorithm feasibility at an intra-company conference.

Projects

Foreground Removal and Background Restoration on Nature Scene *Jan 2019 - May 2019*
- Constructed a coarse-to-refine generative model with Tensorflow and improved the average PSNR from 18 to 22 on nature scene image inpainting.
- Built GUI with PyQT and integrated image filtering, matting and inpainting algorithms to an image editor.
- 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 with pronunciation rules to assist non-English speakers with buzzwords by designing Pytorch skip-gram seq2seq model, and improved 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: Pandas, Numpy, Scipy, Tensorflow, Pytorch, Keras, Scikit-learn, NSML (Auto-ML)
FrontEnd / UI: JavaScript, HTML Jinja2, CSS, Qt, PyQt
Database & others: MySQL, MongoDB, NLTK, OpenCV, OpenGL, Git, LaTex, Linux Programming