

LIANG-YU (CHARLES) CHEN

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github.com / lchenbg

EDUCATION

Columbia University in the City of New York

Master of Science in Computer Science

Jan 2021 - May 2020 (*Expected*)

The Hong Kong University of Science and Technology (HKUST)

Bachelor of Engineering in Computer Science

Ceremony Honoring Students' Academic Excellence Awardee

First Honors Graduate, GPA : 3.65 / 4.30

Sep 2015 - Aug 2019

Purdue University

Bachelor of Science in Computer Science

Exchange Student

Jan 2018 - May 2018

COMPETITIONS AND AWARDS

Hong Kong Cyberport Creative Micro Fund (CCMF)

- Invented web cryptocurrency transaction audit platform and won a sponsorship of 6,500 USD

Apr 2019

Second Runner-up in Think Quest International Competition

- Built a web application to simulate negative effect of garbage disposal via 2D animation

Dec 2011

WORK EXPERIENCE

Hong Kong Applied Science and Technology Research Institute

Engineering Associate

- Trained multiple CNN models with over averaged 90% accuracy for environment attribute extraction
- Integrated models in Tensorflow frozen graph with C++ context in product software SRACE
- Developed DNN based feature selection image registration model for form document alignment
- Constructed new photorealistic document dataset for image registration using Blender 3D rendering
- Created a large text dataset from Hong Kong newspaper media via Selenium and MongoDB

Oct 2019 - Jul 2020

Hong Kong

NAVER Corporation

Research Intern

- Improved averaged top-50 click-through rate of advertisement banners from 3.8% to 4.2%
- Leveraged transfer learning using pre-trained VGG-16 and proposed using soft-NDCG ranking loss
- Conducted image feature analysis with PCA and provide explanations for training results

Jul 2018 - Sep 2018

Korea

OTHER PROJECTS

Job Matching Web Application Development, ManbaseHK

- Built comprehensive web application with Flask and JQuery and launched a startup Manbasehk

May 2020 - Now

Eyeglasses Reflection Removal, HKUST

- Formed a dataset of human faces with/without eye-glasses with labeled eyeglasses areas
- Developed a fully convolutional network to locate eye-glasses with 68 facial landmarks
- Designed a cycle-GAN model to mark pixels of partially reflected areas of eyeglasses

Jun 2019 - Oct 2019

Foreground Removal and Background Inpainting on Nature Scene, HKUST

- Achieved realistic background inpainting with an average PSNR of 22 on nature scene images
- Designed a coarse-to-refine WGAN-GP using partial convolution with perception and style loss
- Produced GUI and implemented multi-processing backend for concurrent computing and IO
- Assigned and managed tasks; in charge of communication between team and supervisors

Jan 2019 - May 2019

Grapheme-to-phoneme Prediction Under Low-resourced Environment, HKUST

- Increased the BLEU score of sequence-to-sequence model from 0.367 to 0.425
- Proposed skip-gram embedding to improve and defined sequence loss for model optimization

Sep 2018 - Dec 2018

LINE Chatbot Diet Assistant, HKUST

- Implemented an interactive system in Java to numerous user requests via parallel processing
- Managed progress with Agile with regular meetings and communication with teammates
- Presented features and highlights to an hundred-people class and launched chatbot on LINE

Sep 2017 - Nov 2017

SKILLS

Programming Languages: C&C++, Java, Python, R, MySQL, JavaScript, PHP, HTML(Jinja), MATLAB

Library: Tensorflow, Pytorch, Keras, Scikit-learn, OpenCV, OpenGL, Qt, Flask, Selenium, BeautifulSoup

Other Computer Skills: Git, Google Cloud, NAVER Smart Machine Learning Platform (NSML), Latex