CHONG HU

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EDUCATION

Columbia University in the City of New York, New York, US — *Aug 2019 - Dec 2020 (expected)*
The Fu Foundation School of Engineer and Applied Science
M.S. in Electrical Engineering

Shanghai Jiao Tong University (SJTU), Shanghai, CN — *Sep 2015 - Aug 2019*
UM-SJTU Joint Institute
B.S. in ECE; Minor in Data Science

Skills: Python, C, C++, R, Java, Julia, MATLAB, Verilog, LaTeX

PROJECTS

HDR[1] Video Recovering Algorithm — *Aug 2018 - Dec 2018*
Deputy Team Leader — *Graduation Project*
Company Sponsor: OTC/SSG/Intel; Company Mentor: Zhao Juan, Intel; Academic Advisor: Long Yong

- Used hdrcnn model to train data to transform LDR to HDR, with different data enhancements and loss functions, eg, cosine loss, in order to reconstructed over exposed area and restored details in dark area
- Evaluated model performance using HDR-VDP v2 and obtained 20/100 more than traditional method
- Applied FFmpeg, OpenEXR to finish the transfer from LDR video to image and image to HDR video, and added meta data of HDR10 format and corresponding BT2020 curves

Music Recommendation System Analyzed from MSD[2] — *Jun 2019 - Aug 2019*
Member — *Course Project*

- Extracted songs information from 160GB MSD and preprocessed data using hadoop and drill
- Built similar artist adjacent matrix using MapReduce in hadoop and Spark and compared two methods
- Used Naive Bayes to guide the scaling data and investigated features inside data using clustering methods
- Constructed the pipeline of music recommendation based on adjacent matrix and features

WORK EXPERIENCE

MokaHR Company — *Dec 2018 - Apr 2019*
Algorithmic Intern, AI Group — *Beijing*

- Combined CTPN and CRNN and developed model to solve resume OCR problems (CN & EN) in TensorFlow
- Simplified Network Structure and sped up inference 2s out of 10s on average, within losing 2% accuracy
- Packaged model into web service using gunicorn and implemented business logic.
- Improved 15% overall performance and about 200% QPS than the original third-party service

Beijing Infervision Company — *Jan 2018 - May 2018*
Algorithmic Intern, Modeling Group — *Beijing*

- Applied YOLO V2 & V3 under darknet frame and FPN under mxnet for illness detection on DR images
- Calculated anchor size and number in different methods for YOLO and combined three detection layers to improve accuracy by 5% roughly on tiny objects
- Utilized Focal Loss to replace original softmax function to care about cases with fewer samples and increase average accuracy by about 3%

ACTIVITIES

Deputy Director, Public Information Department, Student Union of UM-SJTU JI — *Jul 2016 - Jul 2017*

- Took charge of shooting posters and videos for publicity and composed articles to record the latest activities

Volunteer Teacher, Elementary School in Yunnan Province — *Dec 2016 - Jan 2017*

INTERESTS: Photography, Football

[1] High Dynamical Range
[2] Million Song Dataset