I-No Liao

Apply for 2020 Summer Intern - Software Development Engineer
Email: il10@rice.edu | Phone: 832-206-4432 | Website: http://inoliao.info

EDUCATION

RICE UNIVERSITY
MASTER OF COMPUTER SCIENCE
Expected Dec. 2020 | Houston, TX

NATIONAL CHIAO TUNG UNIV.
M.S. IN ELECTRONICS ENGINEERING
Sept. 2014 | Hsinchu, Taiwan
Cum. GPA: 4.0/4.0

NATIONAL CHIAO TUNG UNIV.
B.S. IN ELECTRONICS ENGINEERING
June 2012 | Hsinchu, Taiwan
Cum. GPA: 3.91/4.0

COURSEWORK

Web Development & Design
Database Systems
Data Mining
Parallel Programming
Object-Oriented Programming
Data Structures
Algorithms
Operating Systems
Computer Organization

SKILLS

PROGRAMMING LANGUAGES
Python, C/C++, Java, JavaScript
WEB DEVELOPMENT
HTML, CSS, JavaScript, jQuery,
Node.js, Express.js, Bootstrap
PARALLEL PROGRAMMING
Pthreads, OpenMP, MPI, CUDA,
OpenCL
MACHINE LEARNING
TensorFlow, Keras, Scikit-learn
OTHERS
Web Crawler, OpenCV, Vim, Pandas,
Git, GitHub

LINKS

PERSONAL WEBSITE
http://inoliao.info
LINKEDIN
https://www.linkedin.com/in/i-no-liao-
231644180
GITHUB
https://github.com/INoLiao

EXPERIENCE

NATIONAL CHIAO TUNG UNIV. | RESEARCH ASSISTANT
Aug. 2018 – Apr. 2019 | Taiwan
- Developed TrackNet, a **deep learning network** based on VGG16 + DeconvNet, for high-speed tiny object tracking in sports videos.
- Achieved **85%** badminton tracking precision in broadcast videos by the proposed TrackNet.
- Won the 2019 best project award from the Ministry of Science and Technology of Taiwan and demonstrated TrackNet at the press conference.
- Mentored 4 undergraduate students to learn Deep Learning and Data Mining from the project.
- Project website: https://inoliao.github.io/CoachAI/

MEDIATEK INC. | RF ALGORITHM DESIGN ENGINEER
Dec. 2014 – Dec. 2017 | Taiwan
- Designed an adaptive Digital Pre-Distortion (DPD) algorithm to achieve a 15% power reduction for 4G-LTE and 5G-NR transceivers.
- Developed an **object-oriented** based measurement platform and API using Matlab to realize automatic DPD verification on smartphones.
- Published 2 US patents, US20180331662A1 and US9985590B2, associated with the DPD algorithm.

PROJECTS

TRACKNET OPTIMIZATION | Parallel Programming (Python)
Feb. 2019 – June 2019
- Achieved **3** times runtime speedup on image frames retrieval from videos by **thread pool** techniques under 6-core operation.
- Achieved **4** times runtime speedup on heatmap generation by **multi-core processing** under 6-core operation.
- Project website: https://inoliao.github.io/ppTrackNetWebsite/

NBA GAME PREDICTION SYSTEM | Machine Learning (Python)
Feb. 2018 – Aug. 2018
- Developed a **crawler** program with **data cleaning** functions to collect and format NBA boxscore data from the website automatically.
- Achieved **76.8%** NBA game prediction accuracy in 2017-18 playoffs by the proposed composite **2-stage stacked model** consisting of SVM, GBDT, XGBoost, and AdaBoost.
- Project website: https://inoliao.github.io/nbaWebsite/

PUBLICATIONS

[1] Chao-Han Tsai, **I-No Liao**, Chatrpol Pakasiri, Hsin-Cheng Pan, Yu-Jiu Wang, "A Wideband 20 mW UHF Rectifier in CMOS", *IEEE Microw. Wireless Compon. Lett.*, vol. 25, no. 6, pp. 388-390, Jun. 2015.
[2] Yu-Jiu Wang, **I-No Liao**, Chao-Han Tsai, Chatrpol Pakasiri, "A Millimeter-Wave In-Phase Gate-Boosting Rectifier", *IEEE Trans. Microw. Theory Tech.*, vol. 62, no. 11, pp. 2768-2783, Nov. 2014.