I-No Liao

Apply for 2020 Summer Intern - Software Engineer

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EDUCATION

RICE UNIVERSITY
Master of Computer Science
Aug. 2019 – Present | 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

Computer Programming in C/C++
Data Structures
Algorithms
Data Mining
Parallel Programming
Operating Systems
Computer Organization
Linear Algebra
Probability and Statistics

SKILLS

Languages
Python (15K lines), C/C++, Matlab
Parallel Programming
Pthreads, OpenMP, MPI, CUDA, OpenCL
Web Development
HTML, CSS, JavaScript, jQuery, Node.js, Bootstrap
Machine Learning
TensorFlow, Keras, Scikit-learn
Others
Web Crawler, OpenCV, Vim, Pandas, Git, GitHub

LINKS

Personal Website: **http://inoliao.info**
Github:// **INoLiao**
LinkedIn:// **i-no-liao-231644180**

EXPERIENCE

ADVANCED DATABASE SYSTEM LAB, 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.
- Mentored 4 undergraduate students to learn Deep Learning and Data Mining from the project.
- Project website: https://inoliao.github.io/CoachAI/

MEDIATEK INC. | RF System Design Engineer
Dec. 2014 – Dec. 2017 | Taiwan

- Designed Digital Pre-Distortion (DPD) algorithm to achieve 15% power reduction for 4G-LTE and 5G-NR mobile transceiver.
- Developed a Matlab-based measurement platform and API to realize automatic DPD verification on smartphones.
- Designed RF systems for 4G-LTE and 5G-NR transceivers.

PROJECTS

TRACKNET FLOW PARALLELISM | Parallel Programming
Feb. 2019 – June 2019 | Taiwan

- 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.

NBA GAME PREDICTION SYSTEM | Machine Learning
Feb. 2018 – Aug. 2018 | Taiwan

- Developed a crawler program in Python to retrieve NBA data from the website automatically.
- Achieved 76.8% NBA game prediction accuracy in 2017-18 playoffs by the proposed composite 2-stage stacking 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.
[3] Po-Sen Tseng, Wei-Kai Chang, **I-No Liao**, Tzyuan Shiu, Hsin-Hung Chen, Caiyi Wang, "Adaptive Power Amplifier Supply with Pre-distortion Mechanism", U.S. Patent US20170214370A1, July. 27, 2017.
[4] Yu-Jiu Wang, **I-No Liao**, Chao-Han Tsai, Chatrpol Pakasiri, "Current-rectifying device, gate-boosting rectifier and method of permitting current to flow in one direction when driven by AC input voltage", U.S. Patent US20150194907A1, July. 9, 2015.