Yuan-Ting Hsieh

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Education

University of Wisconsin-Madison Expected June 2019
Master of Science in Computer Sciences GPA: 4.0/4.0 *Madison, WI*
Coursework Database Management Systems, Theory and Applications of Pattern Recognition, Computer Vision, Large-scale Machine Learning and Optimization

National Taiwan University Jan. 2017
Bachelor of Science in Electrical Engineering GPA: 3.83/4.0 *Taipei, TW*
Honors College Student Research Scholarship, Dean's List (top 5%; 3 semesters)
Coursework Machine Learning, Artificial Intelligence, Data Science, Linear Algebra, Probability and Statistics Data Structures and Programming, Algorithms, Operating Systems, Computer Architecture

Skills

Programming Languages Python, C/C++, MATLAB, Java, Javascript, Qt, Bash, SQL
Toolkit/Frameworks TensorFlow, Linux, Git, LIBSVM, Scikit-Learn, OpenCV, XGBoost

Work Experience

JD.com May 2018 - Present
Natural Language Processing Research Intern *Mountain View, CA*
· Performed research on intent classification of JIMI, JD's chatbot using machine learning and deep learning methods
· Implemented and experimented with several latest NLP papers including Temporal Convolutional Network, Simple Word-Embedding based models, and Hierarchical Attention Network in TensorFlow to verify their effectiveness
· Trained a hierarchical attention dilated CNN model from scratch and fine tune the hyper-parameters on 350,000 training data to achieve 88.38% accuracy with 288 class on 40,000 testing data

University of Wisconsin-Madison Sept. 2017 - Present
Teaching Assistant of CS 200: Programming I (Java) *Madison, WI*
· Collaborate with fellow TAs and instructors on a weekly basis to discuss course content and assignments
· Lead discussions and work with students in lab sessions to promote their learning and development

AMAZE June 2017 - Aug. 2017
Data Scientist Intern *Taipei, TW*
· Scrutinized user's online clothing rental behavior to better promote the product
· Built a product recommender with Factorization Machines based on users' click behavior
· Analyzed and synthesized data to incorporate and modify open-source machine learning software library

Research and Selected Projects

Interactive Image Completion [C++, MATLAB, OpenCV] [Website] [Video]
· Built an image completion software which use the same algorithm of Adobe's Content-Aware Fill in Photoshop
· Performed PatchMatch algorithm in multiple scales to achieve smoother images
· Developed a MATLAB user interface which enables users' interactive feedback to improve the final result

Domain Adaptation for Object Recognition and Cross-Lingual Text Categorization [MATLAB]
· Proposed an approach to solve heterogeneous domain adaptation by matching cross-domain data distributions
· Outperformed other state-of-the-art methods on object recognition by average 5% performance improvement
· Co-authored a 6-page full paper and illustrated findings in International Conference on Multimedia and Expo. [1]

MOOC Dropout Prediction (KDD Cup 2015) [Python, XGBoost]
· Extracted and aggregated 482 features from 8 million users' behavior data by exhaustively feature engineering
· Analyzed with Gradient Boosting Decision Trees to achieve a Mean Average Precision of 0.968 of top 9,000 predictions

Real Steel [C/C++, Qt, QML] [Video] [Code]
· Built a motion-sensing boxing game with graphic user interface without prior knowledge in Qt in a month
· Integrated 6-DOF motion sensors and Raspberry Pi with Bluetooth and Wi-Fi to detect movements in real time

Publications

[1] **Yuan-Ting Hsieh***, Shih-Yen Tao*, Yao-Hung Hubert Tsai, Yi-Ren Yeh and Yu-Chiang Frank Wang, "Recognizing Heterogeneous Cross-Domain Data via Generalized Joint Distribution Adaptation", in *IEEE ICME* 2016 (**Oral: top 15%**; *equal contributions) [PDF] [Code] [Data] [Talk] [Slides]