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 Distributed Systems, Computer Vision, Large-Scale Machine Learning and Optimization
Database Management Systems, Theory and Applications of Pattern Recognition, Data Science

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, 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 AI Research — May 2018 - Aug 2018
Natural Language Processing Research Intern (Python) — *Mountain View, CA*
· Performed research on the intent classification module of JIMI, JD's chatbot, using 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
· Proposed a hierarchical attention dilated convolutional neural network model and fine tune the hyper-parameters on 350,000 training data to achieve 88.9% accuracy with 287 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 (Python) — *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 uses 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

Movie Question Answering (MovieQA) [Python, Keras]
· Trained bidirectional Gated Recurrent Units network to efficiently process long plots and obtained an average accuracy of 35% on 14,994 questions, each with 5 multiple-choice answers
· Implemented End-To-End Memory Network with shared linear projections to further improve the accuracy to 38%

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 International Conference on Multimedia and Expo.* 2016 (**Oral: top 15%**; *equal contributions) [PDF] [Code] [Data] [Talk] [Slides]