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Xi Zhou

Objective: Software Developer Engineering

EDUCATION

University of Michigan, Ann Arbor, MI **12/2017**

- M.S.E. Electrical & Computer Engineering
- Key courses: ML, NLP, Computer Vision, Database Management System, Web Database Info Sys

Huazhong University of Science and Technology, Wuhan, China **06/2016**

- Bachelor of Science, Optical Information Science and Technology GPA: 85.68/100 Ranking: 17/110
- Honors: National Scholarship, Merit Students Scholarship, Self-Improvement Scholarship

Exchange student I-Shou University, Taiwan **09/2014-02/2015**

PROFESSIONAL SKILLS

Python, C++, Java, SQL, TensorFlow, Hive, HDFS, Scala, CSS, JavaScript(JQuery), MATLAB, LabVIEW

EXPERIENCE

Internship at **Criteo**. Corp as Software Engineer **05/2017-08/2017**

- Arranged Hadoop streaming action with Oozie workflow to extract beacon logs in HDFS. Implemented MapReduce job in terms of quality check for beacon logs with rules encoded in JSON file. Send metrics to Datadog and set up the threshold for alerting.
- Copied dimension tables from SQL server to PA4 datacenter. Monitoring Walmart offline files on FTP.
- Practice on Hive query and HDFS control. Learned internal tools with Scala.

PROJECTS

Course Projects

Semantic Segmentation on Pascal VOC2012 **10/2017-12/2017**

- Represented the outstanding mean IoU from 86.9% to 88.9% via TensorFlow on the base of DeepLab ResNet-101. Improved the multi-resolution and CRF for sharper boundary of different objects.
- Analyzed quantitatively and qualitatively how much are the influence on result of mean IoU in terms of Object similarity, Boundary complexity, Occlusion and Illumination seperatelly.

Wikipedia Search Engine **03/2017-04/2017**

- Generated tf-idf score and Page rank by implementing MapReduce jobs through Hadoop. Used theory in information retrieval to return relevant Hits for searching query.
- Set up MapReduce server with good fault tolerance in Python. Both maintained multi process in terms of worker registration and job partitioning.

DBMS Design **03/2017-04/2017**

- Implemented recovery algorithm based on ARIES protocol in C++ for the trade-off between performance and ACID properties for No Force + Steal type of transaction manager.
- Connected to a database using a JDBC driver. Tracked down target object out of 1800 entries of users table and 77127 entries of friends table. Optimized query plan for faster runtime.

Interactive Albums Web Service **12/2016-02/2017**

- Applied MVC module to build the back-end with Python Flask. Rendered pages dynamically with AJAX and RESTful API when creating client-side JavaScript in JQuery.
- Constructed a hybrid of single-page and route-based application.

Side Projects

Funny Meme Creating System **10/2016-04/2017**

- MingYang Zhou, Yunhan Ning, **Xi Zhou,** et al. Internet Meme Humor Recognition. IJCNLP (Under review)
- Analyzed NEXT adaptive machine learning system on AWS with EC2 and S3.
- Used humor classifier with logistic regression and relatedness analyzer with Word2Vect to learn the connection between images and texts of good memes.
- Calculated emotional match of memes in dataset in pair with input text that enhance the humor effect.

Artificial Neural Network Algorithm for Multi-Component Gas Analysis **02/2016-07/2016**

- Constructed a robust backpropagation neural network with Levenberg-Marquardt algorithm and gradient descent with momentum algorithm.
- Trained the initiated network with at least 2400 sets of input until it met the error margin. Learned different algorithms for deep learning.