ZEXI CHEN

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SUMMARY

Now I am working as a full-time Software Engineer at Google. Before that, I graduated from the computer science department of NCSU with research on spatial and temporal analytics involving machine learning, computer vision, statistics. My dissertation is about semi-supervised learning and video action recognition. And I am interested in applied machine learning relevant positions.

EDUCATION

North Carolina State University *August 2014 - June 2020*
Ph.D of Computer Science GPA: 4.0/4.0
Specialization in Machine Learning and Computer Vision
Harbin Institute of Technology *August 2009 - July 2013*
Bachelor of Engineering GPA: 3.5/4.0

TECHNICAL STRENGTHS

Programming Languages	C++, Python, R, C, Matlab, SQL
Frameworks & Libraries	Pytorch, Tensorflow, MxNet, CUDA, OpenMP
Data Science	Deep Learning, Statistic Analysis, Big Data Analytics

PROJECT

Semi-supervised Learning(SSL) October 2018 - June 2020

· Proposed a new local clustering method for tackling the confirmation bias issue in the Mean Teacher method; achieved comparable performance with the state-of-the-art SSL methods.

· Proposed a new composite consistency regularization method for addressing the prediction inconsistency problem of semi-GAN method; achieved new state-of-the-art performance among GAN-based SSL methods.

Video Action Recognition April 2017 - September 2018

· Designed a new variant of LSTM, namely Relational LSTM for addressing relation reasoning across space and time between objects in videos

· Proposed a two-branch neural architecture, which obtains comparable performance with the state-of-the-art methods

Change Detection Framework for Crop Monitoring January 2016 - August 2016

· Proposed a novel time series similarity-based change detection framework for identifying inter-annual changes of growing crops, and applied it on satellite time series imagery data

· Implemented GPU-based parallel computing to show the scalability of our method

Sensor-based Activity Recognition October 2015 - December 2015

· Preprocessed the sensor data by data transformation, feature selection, etc

· Applied GMM (Gaussian Mixture Model) to cluster the continuous data

· Ensembled multiple HMMs (Hidden Markov Model) to recognize the human activities

EXPERIENCE

Software Engineer - Google July 2020 - present

· Working at Similar Images team of Google Lens

Software Engineer Intern - Google May 2019 - August 2019

· Developed CNN-based models for image compression artifacts removal

Software Engineer Intern - Google May 2018 - August 2018

· Developed CNN-based models for classifying the cause of the difference given an image pair, primarily used for identifying common issues in image comparison test failures

Software Development Engineer Intern - Amazon May 2017 - August 2017

· Implemented the Hierarchical Spline Forecasting Engine, a disaggregation forecasting statistical model that can generate forecasts for multiple time series that has a hierarchical structure