

JUN ZHUANG

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EDUCATION

Doctorate of Philosophy in Computer Science, School of Science 08/2018-Present
Indiana University-Purdue University at Indianapolis (IUPUI), Indianapolis, IN
Courses: Data Mining, Numerical Optimization, Computer Architecture, Intelligent System, etc.
GPA: 3.57/4.00

Master of Science in Computer Science, School of Engineering and Applied Sciences 09/2016-06/2018
University at Buffalo (UB), Buffalo, NY
Courses: Algorithm, Deep Learning, Computer Vision, Machine Learning, Operating Systems, Distributed Systems, etc.
GPA: 3.57/4.00

Master of Science in Finance, Saunders College of Business 09/2012-08/2013
Rochester Institute of Technology (RIT), Rochester, NY
Awards: Merit Scholarship (Covered 50% tuition fee).
GPA: 3.33/4.00

Bachelor of Engineering in Safety Engineering, School of Mechanical and Automotive Engineering 09/2007-07/2011
South China University of Technology (SCUT), Guangzhou, China
Awards: Honor Scholarship (top 10%), Excellent League Member Honor (top 5%), Merit Student Honor.
GPA: 3.30/4.00

PROFESSIONAL EXPERIENCE

Research Intern, The University of Tennessee, Knoxville – TN Summer 2020

- Collaborated with Dr. Dali Wang to develop efficient deep learning algorithm for synthesizing 3D live microscopic images.

Foreign Exchange Trading Specialist, China Merchants Bank Co., Ltd. – China 01/2014-07/2016

- Executed trading orders; Performed fixed income research; Employed statistical models to predict the trend of foreign exchange rate; Developed a program to classify transaction data and processed large scale data.

PROFESSIONAL SKILLS

Programming Languages: Python (5 yrs+), MATLAB (3 yrs+), Java, C/C++, CUDA, HTML+CSS+JavaScript;

Deep Learning Frameworks: TensorFlow with Keras, PyTorch, DGL;

OS and Platforms: MacOS, Linux, Android, AWS EC2, MySQL, GitHub.

SELECTED PUBLICATIONS

Anti-perturbation of Online Social Networks by Graph Label Transition

Tech: Python, PyTorch, DGL (Under Reviewed by WWW21')

- Proposed a novel graph label transition model, GraphLT, to improve the robustness of the node classifier in online social networks by transiting the node latent representation of graph convolutional networks based on dynamic conditional label transition.

Gaussian Mixture Generative Adversarial Networks Using Non-Exhaustive Learning

Tech: Python, TensorFlow with Keras (Under Reviewed by SDM21')

- Proposed a bidirectional generative adversarial model with Gaussian mixture prior for online detecting new emerging classes and significantly outperforms the baselines on several network intrusion datasets.

Geometrically Matched Multi-source Microscopic Image Synthesis Using Bidirectional Adversarial Networks

Tech: Python, TensorFlow with Keras (Under Reviewed by ISBI21')

- Proposed a novel bidirectional architecture integrating with Auto-Encoder and Generative Adversarial Networks to synthesize geometric-matched multi-source microscopic images.

Into the Reverie: Exploration of the Dream Market

Tech: Python with pandas, MySQL (IEEE BigData 2019)

- Conducted a comprehensive analysis on famous dark-net crypto-market, Dream Market; Explored the potential for de-anonymization of vendors; Evaluated the efficacy of hierarchical agglomerative clustering for grouping together transactions corresponding to the same buyer.

Lighter U-Net for Segmenting White Matter Hyperintensities in MR Images

Tech: Python, TensorFlow with Keras (MobiQuitous 2019)

- Proposed a light architecture, Lighter U-Net, to segment brain MR images for identifying WMH and to achieve comparable performance as the state-of-the-art methods by only using 17% parameters of naive U-Net.

SELECTED COURSE PROJECTS

In-class Kaggle Competition: Audio Classification and Anomaly Detection / Tech: Python, TensorFlow

- Employed BiLSTM to classify audio spectrogram; Applied BiGAN to detect anomaly audio digit; Won the 3rd-place in board.

Equity Price Prediction and Trading Decision Making / Tech: Python, TensorFlow

- Employed LSTM to predict U.S. stock price; Investigated the robustness of different optimizers; Proposed two novel evaluation approaches, price momentum and relative modified sharpe ratio, for trading decision making.

Markov Chain Monte Carlo (MCMC) Bayesian Election Forecasting / Tech: Python

- Implemented Metropolis-Hastings algorithm to predict senate race and compared it with Langevin Monte Carlo method.

Pintos 1-Threads & 2-User Programs / Tech: C

- 1. Extended the functional thread system; 2. Performed “kernel” level programming of user programs.

Replicated Key-Value Storage / Tech: Android programming in Java, socket programming

- Built a simplified version of Amazon Dynamo by implementing partitioning, replication and failure handling.

TEACHING & MENTORING EXPERIENCE

Teaching Assistant, CSCI54900 Intelligent Systems, IUPUI

Fall 2020

- Delivered a [lecture](#) to introduce the topic about genetic algorithm; Organized weekly meeting and instructed students on course project; Graded course assignments.

Mentor, Data Science Research Experience for Undergraduates (DSREU)

Summer 2019

- Assisted in DSREU summer bootcamp; Mentored undergraduate students on the academic research project.

Teaching Assistant, CSCI58000 Algorithm, IUPUI

Spring 2019 / Fall 2020

- Graded course writing and programming assignments; Instructed students to better understand the algorithms.

Teaching Assistant, CSCI57300 Data Mining, IUPUI

Fall 2019

- Helped prepare course miscellaneous; Graded assignments; Instructed students to understand the algorithms of data mining.

PRESENTATIONS

Lighter U-Net for Segmenting WMH in MR Images (Oral), MobiQuitous 2019

Fall 2019

Exploration of Crypto-market (Oral), Graduate Student Symposium, School of Science, IUPUI

Summer 2019

ACADEMIC COMMUNITY SERVICES

Technique Committee Member, 1st International Workshop on EFIOT (In conj. with MobiQuitous 2019)

Fall 2019

ADDITIONAL INFORMATION

Book: S. Ge, *J. Zhuang* et al. Flowers and Moonlight. Jinan University Press, 2015.

Certificates: CFA Level II Candidate

Languages: Cantonese (native), Mandarin (native) and English (fluent)