

Tzu-Cheng (Jason) Chuang

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Summary

Specialized in artificial intelligence, big data analytics, machine learning, data mining, parallel computing, and web development.

WORK EXPERIENCE

Founder/ CEO

7/2018-present

AI4quant, Taipei Taiwan

- Fundraising, searching projects, hiring employees
- Provide AI system integration service to other business

Senior Software Engineer

3/2015-7/2018

Trend Micro, Taipei Taiwan

- Design architecture and DevOps a backend data pipeline system to receive million user requests (gigabytes data) daily for serving business requirement in real-time
- Set up data receiver system with 10X better performance in terms of throughput and response time
- Query data in Hadoop and SQL server to answer to business questions
- Create Tableau report for business users

Analytics Platform Developer, Software Engineer 3

10/2011-1/2015

eBay, San Jose, CA USA

- Apply Machine Learning techniques to do Hadoop node anomaly prediction so that operation team can take action on those abnormal nodes earlier
- Set up and administer a cluster for transferring terabytes of data among analytics platforms (Hadoop, Teradata) with high throughput (gigabytes per second, million rows per second)
- Conduct research on the implementation of Natural Language Processing (NLP), Collaborative Filtering (Recommender System), and Machine Learning algorithms on Teradata DBMS
- Write Java and Python code to process unstructured data, and then load the data to Teradata DBMS
- Assist maintaining analytics platform for big data (petabytes) such as writing data quality checking utilities for billion-row tables and enhancing data mover tool
- Use visualization tool Tableau, Excel, and R to create reports

Associate Software Engineer

6/2010-10/2011

Composite Software, San Mateo, CA USA (acquired by Cisco Systems Inc. in 2013)

- Wrote information retrieval system in Java for discovering relationships in database, and it can analyze multiple million-row tables in parallel
- Increased indexing speed by more than 500 % through redesigning the architecture of data-processing
- Coded data profiling tool using Java and C++ to quickly collect data statistics
- Embedded several sampling mechanisms to deal with different kinds of database management systems, such as DB2, Oracle, Microsoft SQL server, MySQL and Netezza
- Built a mathematical model to compute relationship probability score

Software Engineering Research Assistant

5/2009-8/2009

Academia Sinica, Institute of Information Science, Parallel Processing Lab, Taipei, Taiwan

- Wrote a website using Java, C++, Python, PHP and MySQL for users to submit their jobs; the jobs can be run in parallel
- Developed a standalone software package to compute phylogenetic tree; this program can be run on Windows, Linux and MacOS
- Set up a 16-node high performance computing cluster system
- Used parallel and distributed computing to solve bioinformatics problems

EDUCATION

Purdue University, West Lafayette, IN

Ph.D. in Electrical and Computer Engineering, January 2006 to May 2010

Dissertation title: Novel Techniques to Increase Classification Accuracy in Machine Learning

National Tsing Hua University, Taiwan

Bachelor of Science in Electrical Engineering, September 2000 to June 2004

The Phi Tau Phi Scholastic Honor, 2004

Interdisciplinary Program Certificate: E-Commerce

TECHNICAL SKILLS

Programming language: Python, Java, SQL,

Internet technology: Django, PHP, HTML5, CSS3, JavaScript

Operating system environment: Windows, Linux, MacOS

Software package: Weka, Tableau

AWARDS AND HONORS

2017Q1 Employee of Quarter at Trend Micro, 2017

Cosmic Kudos Award at eBay, 2013

Planet Award at eBay, 2013

Travel Grant of Taipei Economic and Cultural Office (TECO) for ANNIE conference, 2007

The Phi Tau Phi Scholastic Honor, 2004

Chun-Tsung Scholarship, 2002

Shin Kong Life Scholarship 4 years, 2001-2004

PUBLICATIONS

- Chaitali Gupta, Mayank Bansal, Tzu-Cheng Chuang, Ranjan Sinha, Sami Ben-Romdhane, "Astro: A Predictive Model for Anomaly Detection and Feedback-based Scheduling on Hadoop," *2014 IEEE International Conference on Big Data*, pp.854-862.
- Tzu-Cheng Chuang, Okan K. Ersoy, Saul B. Gelfand, "A Consensual Subspace Method to Enhance Classification Accuracy," *Intelligent Engineering Systems Through Artificial Neural Networks*. Vol.18, 2008, ASME Press, pp. 649-656.
- Tzu-Cheng Chuang, Okan K. Ersoy, Saul B. Gelfand, "Protein Secondary Structure Prediction With Hydrophobicity And Hydrophobic Moment," *Intelligent Engineering Systems Through Artificial Neural Networks*. Vol, 17, 2007, ASME Press, pp. 49-56.
- Tzu-Cheng Chuang, Okan K. Ersoy, Saul B. Gelfand, "Boosting Classification Accuracy With Samples Chosen From A Validation Set," *Intelligent Engineering Systems Through Artificial Neural Networks*. Vol. 17, 2007, ASME Press, pp. 455-461.
- Tzu-Cheng Chuang, Okan K. Ersoy, Saul B. Gelfand, "Protein Secondary Structure Prediction with inclusion of Hydrophobicity information," Indy 07 Bioinformatics conference, Indianapolis, IN, May 31-June 2, 2007.

ACTIVITIES

Volunteering website administrator, Tri-City Volunteers 11/2010-2/2014

- Maintained websites and weblogs for Tri-City Volunteers, which is a non-profit organization.

Eta Kappa Nu (HKN) member, Joined in April 2009

Purdue I Love Taiwan Club (ILTC) committee, 2/2006- 4/2007, 3/2009- 2/2010

- Maintained ILTC website and updated some recent events
- Organized some social/ cultural activities for Taiwanese students and others