Yu-Chieh Jack Ho

Data Scientist & AI Researcher

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Professional Summary

I am data scientist / AI researcher with end-to-end product development experiences. When pursuing my Ph.D. at National Taiwan University and doing research at the University of Illinois at Urbana-Champaign, I published 6 research papers / book chapter focusing on advancing recommender systems and IoT systems by leveraging machine learning and data mining methodologies. As a senior data scientist at MoMagic Technologies, I led the design and development of user behavior forecasting models, and worked closely with cross-functional stakeholders on product optimization (e.g., problem formulation, proof of concept (POC), deployment) and pre-sales. Welcome to visit my personal website for more info!

Work Experience

MoMagic Technologies Pvt. Ltd. / Senior Data Scientist

Feb. 2018 - PRESENT, Taipei, Taiwan

Led the design and development of data-driven solutions for Click-Through Rate (CTR), Conversion per Impression (CPI) improvement and Gender Prediction.

- App-Category Distribution model: improved CPI by 40%-500%. (comparing to generic users)
- Deep Neural Network based CTR model: surpassed human targeting by 31%-34% and kept more than 90% conversions.
- Model Incubator: A workflow which Integrate the training and prediction processes into Apache Airflow dags and deployed on Google Cloud Platform automatically.

Worked closely with CFO, VPs on strategy planning and pre-selling:

- Organized online PoC with cross-regional teams to evaluate the proposed models in real campaigns.
- Collaborated with technical PMs from MediaTek to explore the data monetization opportunities of combining edge computing and deep learning.
- Derived and present a smart logistic proposal to SpiceJet (Gurgaon, India) within one month.

Quadas Data / Chief Data Scientist

Apr. 2017 - Dec. 2017, Taipei, Taiwan

Built the first data science team for Quadas and delivered two machine learning solutions for real-time bidding (RTB) monitoring.

- Intelligent Transaction Monitor: detected all known over-bidding events with only 35-55 false alarms (out of 1917 test events)
- Deep-based Fraud Detector: saved 40% media cost with only 15%-30% conversion loss.
- Collaborated with cross-functional developers and deployed proposed solutions on the RTB system.

University of Illinois at Urbana-Champaign / Visiting Scholar

Aug. 2014 - May 2015, IL, U.S.A.

Worked with Dr. Thomas Huang and the Image Formation and Processing (IFP) group and proposed novel deep learning approaches for recommender systems [1].

Quanta Research Institute / Sponsored Researcher

Jan. 2012 - Dec. 2012, Taipei, Taiwan

Cooperated with interdisciplinary experts in an interactive design process and designed a social-aware restaurant recommendation APP: Picus.Q

Corel Corporation / Software Engineer

July 2007 - May 2008, Taipei, Taiwan

Maintained and enhanced software components of multi-media products.

Naval Technical School / Ensign, Instructor (Computer Science)

Dec. 2005 - Nov. 2006, Kaohsiung, Taiwan

- Courses: Database system, Operating system, Application software
- System administration: Maintained and enhanced the course scheduling system

Selected Research Projects (3/6)

An Approach to Commonsense Knowledge Collection, Validation, and Reasoning by Coupled Human and Learning Agents

2011 - 2012, Intelligent Agents Lab, National Taiwan University.

Investigated and maintained a commonsense knowledge base system and developed applications upon it. (project website)

Cloud-enabled ADL Recognition and Service Inference Technology

2010 - 2011, Intelligent Robot Lab, National Taiwan University.

Designed the architecture of ADL Recognition system. Completed a patent draft (technical articles) and published an academic paper [3].

The Attentive Home

2008 - 2010, National Taiwan University, INSIGHT Center

Designed and conducted a user study to understand how the technology fulfills the needs of residents in their daily living. (project website)

Proficiency

Research Interests

Artificial Intelligence (10+ yrs)**,** *Machine Learning* (10+ yrs) and *Data Mining* (10+ yrs) on Recommender Systems, Digital Marketing and Human Computer Interaction

Professional Skills

Machine Learning
Tensorflow, Keras, Scikit-learn, Spark MLlib, BQML(GCP)
Quantitative Data Analysis
SQL, Pandas, Spark DataFrames, Numpy, Matlab

Proof of Concept & Product Deployment
Jupyter Notebook, Google Cloud Platform, Amazon Web Service, Docker, Tableau

Languages

Mandarin Chinese (native speaker)
English (fluent, TOEIC 840): Gave Presentations in several international conferences (e.g., ACM WSDM, New York) and business pitch (SpiceJet Limited, Delhi)

Education

National Taiwan University
Taipei, Taiwan

Doctor of Philosophy in Computer Science.

Dissertation: "Towards Recommendation Diversity and Heterogeneous Data Collaboration: A Machine Learning Approach" [2]

National Dong-Hwa University
Hualien, Taiwan

Master in Computer Science

Tunghai University
Taichung, Taiwan

Bachelor in Computer Science

Activities

Leadership

General Coordinator, Lab Orientation, iAgents Lab 2012

Public Relationship and Student Mentor, OpenHCI 2011, NTU & NTUST

Coordinator, INSIGHT festival, iRobot Lab 2008

Project Lead of several research projects funded by National Science Council (NSC) and Industrial Technology Research Institute (ITRI)

Scholarship

Graduate Student Study Abroad Program (GSSAP), NSC 2014

Selected Publications (3/8)

[1] **Ho, Y.-C.,** Liu, X.-M., Hsu, Y.-J., Huang, S.-T., "Consensus Oriented Recommendation", 9th International Symposium on Computational Intelligence and Design. (ISCID 2016, IEEE)

[2] **Ho, Y.-C**., Chiang, Y.-T., Hsu, Y.-J., "Who likes it more? Mining Worth-Recommending Items from Long Tails by Modeling Relative Preference", 7th International ACM Conference on Web Search and Data Mining. (ACM WSDM 2014)

[3] Huang, Y.-C., **Ho**, **Y.-C.**, Lu, C.-H., and Fu, L.-C., "A Cloud-based Accessible Architecture for Large-scale ADL Analysis", 4th IEEE International Conference on Cloud Computing. (IEEE CLOUD 2011)