

YUSAN LIN

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EDUCATION

The Pennsylvania State University

August 2012 - December 2018

Ph.D. in Computer Science and Engineering

Dissertation: “Machine-Learning-Based Approaches for Learning Marketing Strategies”

National Central University

August 2008 - June 2012

B.S. Computer Science and Information Engineering

Presidential Award (top 3 students)

WORK EXPERIENCE

Amazon Fashion

January 2022 - Present

Applied Scientist

Sunnyvale, CA

Visa Research

December 2018 - December 2021

Artificial Intelligence Research Scientist and Tech Lead

Palo Alto, CA

- Leading the Anomaly Detection Platform team, developed and deployed unsupervised anomaly detection solutions, including change point detection and feature weighting pipeline for multivariate time series, and ensemble forecasting-based settlement file anomaly detection
- Led the Security Analytics team, developed and random-forest-based employee attrition prediction model and graph-based abnormal activity detection model
- Developed fashion recommendation system using deep learning models
- Published four full research paper (TheWebConf 2020, SIGIR 2021, RecSys 2021 and BigData 2021) and one workshop paper (KDD 2019)
- Filed twelve provisional and non-provisional patents

Visa Research

Feb 2018 - May 2018

Research Scientist Intern

Palo Alto, CA

- Developed fashion outfit recommendation system, which led to one provisional patent and one workshop publication (CVPR 2019)

SELECTED PUBLICATION

- Xiaoting Li, Yuhang Wu, Vineeth Rakesh, **Yusan Lin**, Hao Yang, Fei Wang, *SmartQuery: An Active Learning Framework for Graph Neural Networks through Hybrid Uncertainty Reduction*, 31st ACM International Conference on Information Knowledge Management (CIKM 22), Atlanta GA, United States, Oct. 2022
- Huiyuan Chen, **Yusan Lin**, Menghai Pan, Lan Wang, Michael Yeh, Xiaoting Li, Yan Zheng, Fei Wang and Hao Yang, *Denoising Self-Attentive Sequential Recommendation*, 16th ACM Conference on Recommender Systems (RecSys 22), Seattle WA, United States, Sep. 2022 (**Best Paper Award**)
- Bo Dong, Yuhang Wu, Michael Yeh, **Yusan Lin**, Yuzhong Chen, Hao Yang, Fei Wang, Wanxin Bai, Krupa Brahmksri, Zhang Yimin, Chinna Kummitha and Verma Abhisar, *Semi-supervised Context Discovery for Peer-Based Anomaly Detection in Multi-Layer Networks*, The 24th International Conference on Information and Communications Security (ICICS 22), Canterbury, United Kingdom, Sep. 2022

- Maryam Moosaei, **Yusan Lin**, Ablaihan Akhazhanov, Huiyuan Chen, Fei Wang and Hao Yang, *OutfitGAN: Learning Compatible Items for Generative Fashion Outfits*, The 5th Workshop on Computer Vision for Fashion, Art, and Design (CVPR 22), New Orleans, LA, United States, Jun. 2022
- Lan Wang, Huiyuan Chen, Yuhang Wu, **Yusan Lin**, Fei Wang and Hao Yang, *Forecasting-based Multi-aspect Framework for Multivariate Time-series Anomaly Detection*, IEEE International Conference on Big Data (IEEE Big Data 2021), Virtual, Dec. 2021
- Huiyuan Chen, **Yusan Lin**, Fei Wang and Hao Yang, *Tops, Bottoms, and Shoes: Building Capsule Wardrobes via Cross-Attention Tensor Network*, 15th ACM Conference on Recommender Systems (RecSys 21), Amsterdam, Netherlands, Sep. 2021
- Huiyuan Chen, Lan Wang, **Yusan Lin**, Michael Yeh, Fei Wang and Hao Yang, *Structured Graph Convolutional Networks with Stochastic Masks for Recommender Systems*, International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 21), online, Jul. 2021
- **Yusan Lin**, Peifeng Yin, Wang-Chien Lee, *Economic Worth-Aware Word Embeddings*, IEEE International Conference on Data Science and Advanced Analytics (DSAA 20), Sydney, Australia, Oct. 2020
- **Yusan Lin**, Maryam Moosaei, Hao Yang, *OutfitNet: Fashion Outfit Recommendation with Attention-Based Multiple Instance Learning*, IW3C2 The Web Conference (TheWebConf 20), Taipei, Taiwan, Apr. 2020
- **Yusan Lin**, Hao Yang, *Next-Season Design Prediction on High-Fashion Runway*, ACM SIGKDD Workshop on AI for Fashion (KDD 19), Anchorage, AK, United States, Aug. 2019
- **Yusan Lin**, Maryam Moosaei, Hao Yang, *Learning Personal Tastes in Choosing Fashion Outfits*, Understanding Subjective Attributes of Data: Focus on Fashion and Subjective Search workshop (CVPR 19), Long Beach, CA, United States, Jun. 2019
- **Yusan Lin**, Peifeng Yin, Wang-Chien Lee, *Modeling Dynamic Market Competition on Crowdfunding*, IW3C2 The Web Conference (WWW 18), Lyon, France, Apr. 2018
- **Yusan Lin**, Peifeng Yin, Wang-Chien Lee, *Modeling Menu Bundle Designs of Crowdfunding Projects*, ACM Conference on Information and Knowledge Management (CIKM 17), Singapore, Nov. 2017
- **Yusan Lin**, Tawei Wang, *Dress Up Like a Stylist? Learning from A User-Generated Fashion Network*, 20th ACM SIGKDD Workshop on Machine Learning Meets Fashion (KDD 17), Halifax, Canada, Aug. 2017
- Jorge Alé Chilet, Cuicui Chen, **Yusan Lin**, *Analyzing Social Media Marketing in the High-End Fashion Industry Using Named Entity Recognition*, IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 16), San Francisco, CA, Aug. 2016
- **Yusan Lin**, Chung-Chou H. Chang, Wang-Chien Lee, *Analyzing Social Media Marketing in the High-End Fashion Industry Using Named Entity Recognition*, IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 16), San Francisco, CA, Aug. 2016
- **Yusan Lin**, Heng Xu, Yilu Zhou, Wang-Chien Lee, *Styles in the Fashion Social Network: An Analysis on Lookbook.nu*, International Social Computing, Behavioral Modeling and Prediction Conference (SBP15), 2015
- **Yusan Lin**, Yilu Zhou, Heng Xu, *Text-Generated Fashion Influence Model: An Empirical Study on Style.com*, Hawaii International Conference on System Sciences (HICSS 15), Kauai, HI, Jan.

2015

- **Yusan Lin**, Yilu Zhou, Heng Xu, *The Hidden Influence Network in the Fashion Industry*, Workshop on Information Technologies and Systems (WITS 14), Auckland, New Zealand, Nov. 2014

TEACHING EXPERIENCE

Instructor Aug 2015 - Dec 2016
CMPSC431 W Introduction to Database Management Systems
YouTube channel:
https://www.youtube.com/channel/UCjkGzGfgvX_Zd8kxs4ldhFw University Park, PA

- Senior-level course with 70 students enrolled on average
- Received 6.7/7 on the students' evaluations
- Awarded with graduate student teaching award

INTERVIEWS AND INVITED TALKS

The Social Impact of Your PhD 2022
Beyond the PhD: PhD and Postdoctoral Career Conference

Fashion Predictions 2021
Data Skeptic Podcast

Application of Artificial Intelligence in the Fashion Industry 2021
Z-Combinator, Taiwan

Artificial Intelligence in Fashion 2018
Keynote, Fashion Technology Week New York, New York

Fashion Meets Data Science 2017
Fashion Technology Week New York, Microsoft Flagship Store, New York

Meet the Fashion Data Analyst Working to Predict the Next Big Trend 2016
Teen Vogue, Issue: December

Measuring the Influence of Fashion Designers 2015
Data Skeptic Podcast, Episode 68

AWARDS

Information & Intelligent Systems Research Grant 2017
National Science Foundation, with Wang-Chien Lee (Pennsylvania State University)

University Research Council Competitive Research Grant 2017
Kellstadt Graduate School of Business, DePaul University, with Ta-Wei Wang (DePaul University)

Research Grant 2016
The Institute for Quantitative Social Science (IQSS), Harvard University, with Cuicui Chen (Harvard University), Jorge Alé Chilet (Hebrew University)

Graduate Student Teaching Award 2016
Department of Computer Science and Engineering, Penn State University, one awardee per year

SERVICE

DSAA Research Track, Program Chair	2021
DASFAA Technical Program Committee	2021
DSAA Research Track, Program Chair	2020
KDD AI for Fashion, Program Chair	2019
CIKM Applied Research Track, Program Chair	2019