

# YUSAN LIN

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## EDUCATION

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### The Pennsylvania State University

December 2018

Ph.D. in Computer Science and Engineering

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

### National Central University

June 2012

B.S. Computer Science and Information Engineering

Presidential Award (top 3 students)

## WORK EXPERIENCE

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### Visa Research

December 2018

*Staff Research Scientist*

*Palo Alto, CA*

- Developed fashion recommendation system using Deep Learning models
- Published two workshop papers in CVPR 2019 and KDD 2019
- Filed one provisional patent: *System, Method, and Computer Program Product for a Set of Items to a User* (with Maryam Moosaei and Hao Yang, Reference number: 3689US01)

### Visa Research

Feb 2018 - May 2018

*Research Scientist Intern*

*Palo Alto, CA*

- Filed one provisional patent: *System, Method, and Computer Program Product for Predicting User Preference of Items in an Image* (with Maryam Moosaei and Hao Yang, Reference number: 2957US01)

### Trendalytics

May 2015 - July 2015

*Data Scientist Intern*

*New York City, NY*

- Refined product trend classifier via machine learning approach
- Designed fashion product recommendation system using ShopStyle data based on probabilistic generative model to recommend brands and products to users

## RESEARCH EXPERIENCE

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### Dissertation Research

#### Machine-Learning-Based Approaches for Learning Marketing Strategies

*Adviser: Wang-Chien Lee*

- Predicted crowdfunding project success by extracting implicit reward features, outperforming state-of-the-arts by 18.73%
- Developed menu bundle generator by using probabilistic generative models, outperforming LDA by 29.3% in accuracy when predicting menu formulation
- Proposed dynamic market competition predictor by using probabilistic generative models
- Worked with adviser to earn support by a competitive NSF Information & Intelligent Systems research grant (NSF IIS-1717084 Learning Latent Representations of Heterogeneous Information Networks)

### Related Research

#### Modeling Fashion

*Collaborators: Cuicui Chen (Harvard University) & Jorge Al Chilet (Hebrew University)*

- Detected the innovation and influence in the fashion industry using NLP and econometrics on data from social networks, runway reviews, and retail websites across a two-year period
- Funded by IQSS at Harvard University and supported by startup companies, StyleSage and Descience

### Competitions on Fashion Social Network

*Collaborator: Ta-Wei Wang (DePaul University)*

- Created dataset of 120K user-generated fashion outfits for research use
- Designed classifier predicting whether given users will adopt certain brands in outfits using user demographics and network structure, reaching 96.54% in accuracy
- Funded by Research Grant, Kellstadt Graduate School of Business, DePaul University

## PUBLICATION

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- **Yusan Lin**, Hao Yang, *Next-Season Design Prediction on High-Fashion Runway*, 22th ACM SIGKDD Workshop on AI for Fashion (KDD 19), 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), 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 Al 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

## AWARDS

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**Information & Intelligent Systems Research Grant**

*National Science Foundation, with Wang-Chien Lee (Pennsylvania State University)*

2017

<b>University Research Council Competitive Research Grant</b>	2017
<i>Kellstadt Graduate School of Business, DePaul University, with Ta-Wei Wang (DePaul University)</i>	
<b>Research Grant</b>	2016
<i>The Institute for Quantitative Social Science (IQSS), Harvard University, with Cuicui Chen (Harvard University), Jorge Al Chilet (Hebrew University)</i>	
<b>Graduate Student Teaching Award</b>	2016
<i>Department of Computer Science and Engineering, Penn State University, one awardee per year</i>	

## PATENTS

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<b>System, Method, and Computer Program Product for Predicting User Preference of Items in an Image</b>	2018
<i>Reference number: 2957US01</i>	
<b>System, Method, and Computer Program Product for a Set of Items to a User</b>	2019
<i>Reference number: 3689US01</i>	

## TEACHING EXPERIENCE

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<b>Instructor</b>	Aug 2015 - Dec 2016
<i>CMPSC431 W Introduction to Database Management Systems</i>	
<i>YouTube channel:</i>	
<i><a href="https://www.youtube.com/channel/UCjkGzGfgvX_Zd8kxs4ldhFw">https://www.youtube.com/channel/UCjkGzGfgvX_Zd8kxs4ldhFw</a></i>	<i>University Park, PA</i>
<ul style="list-style-type: none"> <li>· Senior-level course with 70 students enrolled on average</li> <li>· Received 6.7/7 on the students' evaluations</li> <li>· Awarded with graduate student teaching award</li> </ul>	

## INTERVIEWS AND INVITED TALKS

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<b>Artificial Intelligence in Fashion</b>	2018
<i>Keynote, Fashion Technology Week New York, New York</i>	
<b>Fashion Meets Data Science</b>	2017
<i>Fashion Technology Week New York, Microsoft Flagship Store, New York</i>	
<b>Meet the Fashion Data Analyst Working to Predict the Next Big Trend</b>	2016
<i>Teen Vogue, Issue: December</i>	
<b>Measuring the Influence of Fashion Designers</b>	2015
<i>Data Skeptic Podcast, Episode 68</i>	

## SERVICE

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<b>KDD AI for Fashion, Program Chair</b>	2019
<b>CIKM Applied Research Track, Program Chair</b>	2019