Jie Yang

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Education

- **Ph.D. Delft University of Technology, 2017.**
  Web Information Systems group
  Adviser: Geert-Jan Houben, Alessandro Bozzon.

- **M.Sc. Eindhoven University of Technology, 2013**.
  Cum Laude (highest honor) in Computer Science
  Adviser: Toon Calders (TU/e), Reinder Haakma (Philips Research).

- **B.Eng. Zhejiang University, 2011.**
  Computer Science; GPA: 3.86/4.

Research Interests

- User Modeling & Recommender Systems:
  [ACM RecSys 2016], [KDWeb 2015], [ACM UMAP 2015], [ICWE 2015], [ACM UMAP 2014]

- Human Computation & Crowdsourcing:
  [AAAI HCOMP 2016], [TURSTINCW@ACM WebSci 2016], [Computer Network], [ACM UMAP 2015], [ICWE 2015], [ACM HyperText 2014]

- Social Data & Urban Analytics:
  [ACM WebSci 2016], [ICWE 2016], [KDWeb 2016], [KDWeb 2015], [IDEA@ACM KDD 2013]

Experience

- Ph.D. Researcher, Delft University of Technology, The Netherlands, 2013 - Present
  Work on Social Data Science in general
  Aim at understanding people's social behavior in the cyber and physical world, and utilizing such knowledge to better serve different applications
  Create User Modeling techniques for personalization, e.g. Recommender Systems, and create new Recommendation techniques to enable Crowdsourcing to solve complex tasks
  Follow, publish papers in, and go to, the following conferences: ACM UMAP, ACM RecSys, AAAI HCOMP, ACM WebSci, ACM HyperText, ICWE, etc.
  Together with Amsterdam AMS initiative and IBM Netherlands, I validate my work in Urban Analytics and Enterprise Crowdsourcing
  Research outcome used by organizations including municipalities, institutions, and companies, including **the municipality of Amsterdam, TU Delft, AMS, FabCity, IBM, and etc.**
  Research outcome applied in city-scaled events, including **Milan Design Week 2014, Amsterdam Light Festival 2015, SAIL Amsterdam 2015, Kingsday 2016**

- Research Intern, Philips Research, The Netherlands, 2013
  Discriminative feature extraction from cardio-respiratory time series data for deep/non-deep sleep classification
  Rank 1st among all ∼200 features, w.r.t. discriminative power.
  Results published in [Physiological Measurement 2014]. Feature used in the new **Health Watch** product of Philips, on market in 2016 after 3 years of my work, the only health watch product registered with FDA.

Professional Activities

- Member of ACM SIGWEB

- Review for the following conferences:
  AAAI Conference on Human Computation and Crowdsourcing **(HCOMP)**, 2016
  International Joint Conferences on Artificial Intelligence **(IJCAI)**, 2016
  International Conferences on Web Engineering **(ICWE)**, 2015

- And the following journals:
  Journal of Web Engineering **(JWE)**

Honors

- Best Paper Award, TRUSTINCW @ACM WebSci, 2016.
  Awarded by both the program committee members and the crowd.

- UMAP Student Travel Award, 2014 & 2015.

- ACM SIGWEB Student Travel Award, 2014.

- Philips Amandus H. Lundqvist Scholarship, 2011 - 2013.
  Granted to fully support the study and life expense for the 2-year master program.

- Zhejiang University Research and Innovation Award, 2010.

Conference, Journal, and Workshop Papers

1. **Jie Yang**, Judith Redi, Alessandro Bozzon, Gianluca Demartini. Modeling Crowdsourcing Task Complexity. In Proceedings of the 4th AAAI Conference on Human Computation and Crowdsourcing **(HCOMP 2016)**, full paper, Austin, TX, US, October 30 - November 3, 2016, AAAI.

2. Arkka Dhiratara, **Jie Yang**, Alessandro Bozzon, Geert-Jan Houben. Social Media Data Analytics for Tourism – A Preliminary Study. In Proceedings of the 2nd Knowledge Discovery on the Web **(KDWeb 2016)**, full paper, Cagliari, Italy, September 08 - 10, 2016.

3. **Jie Yang**, Zhu Sun, Alessandro Bozzon, Jie Zhang. Learning Hierarchical Feature Influence for Recommendation by Recursive Regularization. In Proceedings of the 10th ACM Conference on Recommender Systems **(RecSys 2016)**, full paper, Boston, MA, US, September 15 - 19, 2016, ACM.

4. **Jie Yang**, Alessandro Bozzon. On the Improvement of Quality and Reliability of Trust Cues in Micro-task Crowdsourcing. In the 1st ACM Web Science Workshop on Weaving Relations of Trust in Crowd Work: Transparency and Reputation across Platforms. **(TURSTINCW@ACM WebSci 2016)**, position paper, Hannover, Germany, May 22 - 25, 2016, ACM. Best Paper Award

5. Deniz Iren, Cynthia Liem, **Jie Yang**, Alessandro Bozzon. Using Social Media to Reveal Social and Collective Perspectives on Music. In Proceedings of the 8th ACM Conference on Web Science **(WebSci 2016)**, short paper, Hannover, Germany, May 22 - 25, p. 296-300, 2016, ACM.

6. **Jie Yang**, Claudia Hauff, Geert-Jan Houben, Christiaan Titos Bolivar. Diversity in Social Media Urban Analytics.In Proceedings of the 16th International Conference on Web Engineering **(ICWE 2016)**, full paper, Lugano, Switzerland, June 6 - 9, p. 335-353, 2016, Springer LNCS.

7. Yuan, Lu, **Jie Yang**. Notes on Low-rank Matrix Factorization. In **arxiv:1507.00333**, 2015.

8. Giuseppe Silvestri, **Jie Yang**, Alessandro Bozzon, Andrea Tagarelli. Linking Accounts across Social Networks: the Case of StackOverflow, Github and Twitter. In Proceedings of the 1st Knowledge Discovery on the Web **(KDWeb 2015)**, full paper, Cagliari, Italy, September 03 - 05, 2015, p. 41-52, CEUR Vol-1489.

9. Jasper Oosterman, **Jie Yang**, Alessandro Bozzon, Lora Aroyo, Geert-Jan Houben. Crowdsourcing Visual Artwork Annotations in Cultural Heritage. In **Computer Networks 2015**, 90 133-149, Elsevier, 2015.

10. **Jie Yang**, Alessandro Bozzon, Geert-Jan Houben. Harnessing Engagement for Knowledge Creation Acceleration in Collaborative Q&A Systems. In Proceedings of the 23rd Conference on User Modeling, Adaption and Personalization **(UMAP 2015)**, full paper, Dublin, Ireland, June 29 - July 03, p. 315-327, 2015, Springer LNC 9146.

11. E-Wise: an Expertise-Driven Recommendation Platform for Web Question Answering Systems. **Jie Yang**, Alessandro Bozzon, Geert-Jan Houben. In Proceedings of the 15th International Conference on Web Engineering **(ICWE 2015)**, demonstration paper, Rotterdam, the Netherlands, June 23 - 26, 2015, p. 691-694, 2015, Springer LNCS 9114.

12. **Jie Yang**, Alessandro Bozzon, Geert-Jan Houben. Knowledge Crowdsourcing Acceleration. In Proceedings of the 15th International Conference on Web Engineering **(ICWE 2015)**, doctoral symposium paper, Rotterdam, the Netherlands, June 23 - 26, 2015, p. 691-694, 2015, Springer LNCS 9114.

13. **Jie Yang**, Claudia Hauff, Alessandro Bozzon, Geert-Jan Houben. Asking the Right Question in Collaborative Q&A Systems. In Proceedings of the 25st ACM Conference on Hypertext and Social Media **(Hypertext 2014)**, full paper, Santiago Downtown, Chile, September 1 - 4, p. 179-189, 2014, ACM.

14. **Jie Yang**, Ke Tao, Alessandro Bozzon, Geert-Jan Houben. Sparrows and Owls: Characterisation of Expert Behaviour in StackOverflow. In Proceedings of the 22nd Conference on User Modeling, Adaption and Personalization **(UMAP 2014)**, full paper, Aalborg, Denmark, July 7 - 11, 2014, p. 266-277, 2014, Springer LNCS.

15. Xi Long, **Jie Yang**, Tim Weysen, Reinder Haakma, Jerome Foussier, Pedro Fonseca, Ronald M. Aarts. Measuring Dissimilarity Between Respiratory Effort Signals based on Uniform Scaling for Sleep Staging. In **Physiological Measurement 2014**, 35 (12) 2529-2542, 2014, Institude of Physics and Engineering in Medicine.

16. Hoang Thanh Lam, Toon Calders, **Jie Yang**, Fabian Moerchen, Dmitriy Fradkin. Zips: Mining Compressing Sequential Patterns in Streams. In Proceedings of the ACM SIGKDD Workshop on Interactive Data Exploration and Analytics **(IDEA @KDD 2013)**, full paper, Chicago, Illinois, USA, August 11 - 14, 2013, p. 54-62, 2013, ACM.

Recent Presentations & Invited Talks

- "Modeling Task Complexity in Crowdsourcing", **AAAI HCOMP 2016**, Austin, TX, USA, October, 2016.

- "Mining Social Data for Knowledge Creation Acceleration", **TU/e Data Mining Seminar**, Eindhoven, The Netherlands, October, 2016.

- "Learning Hierarchical Feature Influence for Recommendation by Recursive Regularization", **ACM RecSys 2016**, Boston, MA, USA, Sepember, 2016.

- "Recommender Systems and Beyond in Web Information Systems", **Delft Recsys Working Group Meeting**, Delft, The Netherlands, January, 2016.

Teaching Experience

- Social Web Data Analytics
  Guest Lecturer, MS.c. Course in TU Delft, *Web Science and Engineering*, 2016.

- Social Network Analysis – from the perspective of social data science
  Guest Lecturer, MS.c. Course in TU Delft, *Information Retrieval*, 2016.

- Online Knowledge Crowdsourcing
  Guest Lecturer, MS.c. Course in TU Delft, *Information Retrieval*, 2016.

- Methods in Collaborative Konwledge Creation on the Web
  Guest Lecturer, MS.c. Course in TU Delft, *Mining Software Repositories*, 2015.

- Methods in Social Web Data Analytics & Web Science
  Guest Lecturer, MS.c. Course in TU Delft, *Web Science and Engineering*, 2015.

- Accelerating Knowedge Creation in Collaborative Q&A Systems
  Guest Lecturer, MS.c. Course in TU Delft, *Mining Software Repositories*, 2014.

- Social Web Data Analytics
  Guest Lecturer, MS.c. Course in TU Delft, *Web Science and Engineering*, 2014.

Student Mentoring

- Rucha Bapat. Ms.c. Thesis: Crowd-enhanced Conversational Agents. TU Delft, 2017.

- Aditi Rawat. Ms.c. Thesis: Cross-platform Expertise Characterisation in Online Software Development Communities. TU Delft, 2017.

- Carlo van der Valk. Ms.c. Thesis: Perception of Task Complexity in Crowdsourcing Communities. TU Delft, 2016.

- Vincent Gong. Ms.c. Thesis: Urban Analytics with Multi-Cultural Social Media Sources. TU Delft, 2016.

- Giuseppe Silvestri. Visiting Project: Cross-Platform Expertise Characterisation. TU Delft, 2015.

- Friso Abcouwer. Msc. Thesis: Complexity of Human Computation Tasks. TU Delft, 2015.

- Sijmen Hoogendijk. Msc. Thesis: Ask the Right Expert – Question Routing Based On User Expertise in Web Questions Answering Systems. TU Delft, 2014.

Programming Languages and Tools

- Languages: Python, Matlab, Java, Shell, C, C++, JavaScript, PHP

- Tools: scikit-learn, Jupter notebook, Torch, Tensorflow, Caffe, Pandas, NLTK, Graphlab-create, Postgresql, and many machine learning & optimization tools

Natural Languages

- Mandarin Chinese (Native), English (Fluent), Dutch (Learning)

References

- **Geert-Jan Houben**, Delft University of Technology
  Professor of Web Information Systems, Scientific Director of Delft Data Science (DDS), KIVI-chair Big Data Science, Principal Investigator in AMS, Amsterdam Institute for Advanced Metropolitan Solutions.
  Email: `g.j.p.m.houben@tudelft.nl`

- **Alessandro Bozzon**, Delft University of Technology
  Assistant Professor in Web Information Systems, Faculty Fellow with the IBM Benelux Center of Advanced Studies, Principal Investigator, Data Science Enabling Technologies in AMS.
  Email: `a.bozzon@tudelft.nl`

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