

Vineeth Rakesh Mohan

Career Summary

Machine learning researcher with strong publication record and extensive knowledge in designing and implementing recommendation and information retrieval models for large heterogeneous data. Experienced in working and collaborating with teams in a business oriented research environment.

Research Interests

Machine Learning, Graphical Models, Deep Generative Models, Recommender Systems, Supervised and Unsupervised Learning, Text Mining, Social Network Analysis, Big Data, Probabilistic and Statistical Models.

Education

- 2012–2017 **PhD**, Department of Computer Engineering, Wayne State University, Detroit, CGPA – 3.79. **Thesis:** Probabilistic Personalized Recommendation Models for Heterogeneous Social Data. Supervised by Dr.Chandan K. Reddy.
- 2009–2013 **Masters**, Department of Computer Science, Wayne State University, Detroit, GPA – 3.86. **Thesis:** Performance Evaluation Of Voice Chat In Vehicular Ad-Hoc Networks. Supervised by Dr.Hongwei Zhang.
- 2005–2009 **Bachelor of Engineering**, Electronics and Communication, Jerusalem College of Engineering, Anna University, Chennai, India, CGPA – 3.5/4.

Experience

- Post Doctoral Fellow **Arizona State University, Tempe, AZ, Aug'17-Present, Advisor:** Dr. Huan Liu. **Deep Graphical Models for Personalization and Recommendation:** My ongoing research focuses on the integrating deep neural networks with generative graphical models to create Generative Auto Encoders and Adversarial Variational Bayes models for creating scalable systems for user personalization.
- Internship **Technicolor Labs, Los Altos, CA, Sept'16-Feb'17.** **Implementation of Information Retrieval System in Large Business Setting:** Proposed sparse topic models for retrieving fine-grained sentiments and aspects from textual content of products, movies and restaurant reviews from domains such as Amazon, IMDB and Yelp. Implemented in production system for chatbox application, beating the state-of-the-art model with 85% accuracy.
- Internship **Comcast Labs, Washington DC, May'16-Aug'16.** **Developing scalable personalized recommendation models for X1 Xfinity System:** Worked on two key projects: my first project was to optimize for cache storage by clustering consumers of video on demand (VOD) programs. This task was performed by infusing scalable latent factorization techniques using Apache's spark framework into Xfiniti's state-of-the-art recommendation model to provide personalized program suggestions on a cluster-level. In my second project, I worked on the problem of automated profile detection by developing hybrid collaborative and content based recommendation framework.
- Research **Graduate Research Assistant, Dec'12- April'16.** Developed recommendation and predictive models on heterogeneous data sources such as microblogging data from Twitter, location-based data from Foursquare, and crowdfunding data from Kickstarter. I proposed and implemented several variations of topic models and other machine learning models, which include ensemble, regression, and clustering techniques for applications such as recommending projects to crowdfunding communities, suggesting point of interests (POIs) to travelers, and capturing fine-grained topical summaries from Twitter.

Teaching **Graduate Teaching Assistant**, Aug'12-Jan'13.

I served as teaching assistant to undergrad and grad courses on datamining and machine learning. During this period, I was responsible for teaching various concepts on text mining, and presenting demos on data mining and visualization tools such as Weka, Rapid Miner, and SciKits.

Web & IT **Graduate Student Assistant**, Jan'10-Aug'12.

Support Worked as server support staff for Computing and Information Technology (C&IT) department of Wayne State. My work involved writing powershell scripts for automating server side installations. I was also responsible for creating interactive webpages using HTML and javascript for the department of Geological Sciences.

Publications

- 2018 **Vineeth Rakesh**, *Weicong Ding, Nikhil Rao, Yifan Sun, Chandan K. Reddy*.
Twin-Sparse Topic Model for Aspect Summarization from Online Reviews. Submitted to ACM International Conference on World Wide Web (WWW).
- 2017 **Vineeth Rakesh**, *Niranjan Jadhav, Alexander Kotov, Chandan K. Reddy*.
Probabilistic Social Sequential Model for Tour Recommendation. In Proceedings of the ACM International Conference on Web Search and Data Mining (WSDM).
- 2016 **Vineeth Rakesh**, *Wang-Chien Lee, Chandan K. Reddy*.
Probabilistic Group Recommendation Model for Crowdfunding Domains. In Proceedings of the ACM International Conference on Web Search and Data Mining (WSDM).
- 2016 *Yan Li, Vineeth Rakesh, Chandan K. Reddy*.
Project Success Prediction in Crowdfunding Environments. In Proceedings of the ACM International Conference on Web Search and Data Mining (WSDM).
- 2015 **Vineeth Rakesh**, *Jaegul Choo, Chandan K. Reddy*.
Project Recommendation using Heterogeneous Traits in Crowdfunding. In Proceedings of International AAAI Conference on Web and Social Media (ICWSM).
- 2015 *Alexander Kotov, Vineeth Rakesh, Chandan K. Reddy*.
Geographical Latent Variable Models for Microblog Retrieval. In Proceedings of the European Conference on Information Retrieval (ECIR).
- 2014 **Vineeth Rakesh**, *Dilpreet Singh, Bhanukiran Vinzamuri, Chandan K. Reddy*.
Personalized Recommendation of Twitter Lists using Content and Network Information. In Proceedings of International AAAI Conference on Weblogs and Social Media (ICWSM).

Skills

Languages PYTHON, R, JAVA, HTML.
ML Package SCIKITS, SPARK MLLIB, TENSOR FLOW, SCIPY.
Big Data APACHE SPARK, PYSPARK.
Database COUCHDB, SQL.
OS LINUX, WINDOWS, OS X.

Awards

Student travel award, ICWSM 2015.
SIGIR student scholarship, WSDM 2016.

Service

I have served as an external reviewer for various Journals and conferences such as: TIST 17-18, WSDM 12-13, KDD 14-15, ICWSM 12-13, TKDE, SDM, ASONAM, and CIKM.

Other Interests

Photography I am an avid nature, wildlife and travel photographer. My works can be seen from my portfolio webpage www.rkz7photography.com