

# Suvash Sedhain

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## Research Interests

My research interests are in large-scale machine learning and data science with a focus on recommender systems. I have a solid practical understanding of neural networks and deep learning architectures.

## Education

- Aug'12 - July'16 **PhD, Computer Science**, *Australian National University/NICTA*, Canberra, Australia.  
Advisors: Scott Sanner, Lexing Xie, Aditya Krishna Menon
- Oct'05 - Jan'10 **BE, Computer Engineering**, *Tribhuvan University*, Kathmandu, Nepal.  
Grade: Distinction

## Work Experience

- Sept'16 - Current **Data Scientist**, *Tabcorp Holdings*, Sydney, Australia.  
Working on user behavior and predicting sports modeling.
- Jan'16 - July'16 **Research Scientist Intern [Part Time]**, *Adobe Systems*, Sydney, Australia.  
Worked on one-class collaborative filtering algorithms and visualization.
- Aug'15 - Dec'15 **Research Scientist Intern**, *Adobe Research*, San Jose, CA, USA.  
Developed a model to scale up linear collaborative filtering algorithms on large scale datasets using randomized dimensionality reduction.
- Dec'13 - Mar'14 **Research Intern**, *Kobo Inc.*, Toronto, Canada.  
Developed a social recommendation algorithm for cold-start users; published the work at RecSys-14. Proposed method achieved up-to 300% improvement over the baselines in offline test.
- May'10 - Aug'12 **Software Engineer**, *Logpoint Inc.*, Aldersrogade 6A 2100 Copenhagen, Denmark; Worked from Kathmandu Office.  
Worked on designing backend infrastructure for Security Information and Event Management (SIEM) System. Developed hot standby and notification system for various system components

## Publications

- S. Sedhain, A. Menon, S. Sanner, L. Xie, D. Braziunas, Low-rank Linear Cold-Start Recommendation from Social Data. AAAI-17, CA, USA [Full paper] (Accepted)
- S. Sedhain, H. Bui, J. Kawale, N. Vlassis, B. Kveton, A. Menon, S. Sanner, T. Bui (2016), Practical Linear Models for Large-Scale One-Class Collaborative Filtering. IJCAI-16, NY, USA. [Full paper]
- S. Sedhain, A. Menon, S. Sanner, D. Braziunas (2016), On the Effectiveness of Linear Models for One-Class Collaborative Filtering. AAAI-16, Phoenix, USA. [Full Paper]
- S. Sedhain, A. Menon, S. Sanner, and L. Xie (2015). AutoRec: Autoencoders Meet Collaborative Filtering. WWW-15, Florence, Italy. [Short Paper]

S. Sedhain, S. Sanner, D. Braziunas, L. Xie, and J. Christensen (2014). Social collaborative filtering for cold-start recommendations. RecSys-14, Foster City, California, USA. [Short Paper]

S. Sedhain, S. Sanner, L. Xie, R. Kidd, K. Tran, and P. Christen(2013). Social affinity filtering: recommendation through finegrained analysis of user interactions and activities. COSN-13, Boston, USA. [Full Paper]

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## Patent

S Sedhain, D Braziunas, J Christensen. Generating Recommendations For Unfamiliar Users By Utilizing Social Side Information, US Patent 20,150,379,609

S. Sedhain, H. Bui, B. Kveton, Low Rank Regularized Linear Model for Large Scale Implicit Feedback Recommendation (Filed)

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## Skills

Python/Cython, Java, C/C++, Javascript, Scheme, HTML, CSS  
Spark, Hadoop, Scikit-Learn

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## Academic Services

Reviewer VLDB'16, WSDM'15, WWW'14, IEEE Transactions on Multimedia  
Sub Reviewer ICML'14, IJCAI'13 , WWW'13, TKDE'15

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## Awards

WWW'15 Google Student Travel Grant  
Social Media and Machine learning Scholarship (AUD \$5000)  
ANU National ICT Australia Ltd PhD Scholarship (International Students)  
ANU National ICT Ltd PhD Supplementary Scholarship  
Full government scholarship for Undergraduate studies  
First prize in software competition, LOCUS 09, IOE  
First position in Catcoder programming competition, IOE

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## References

**Scott P. Sanner**  
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University of Toronto  
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**Hung Bui**  
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**Jaya Kawale**  
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**Darius Braziunas**  
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