

Aditya Krishna Menon

University of California, San Diego
CSE Department, 0404
9500 Gilman Drive
La Jolla, CA 92093

Email: akmenon@ucsd.edu
Homepage: <http://www.cse.ucsd.edu/~akmenon>
Phone: (858) 699 1354

- EDUCATION
- ◇ **University of California, San Diego**, La Jolla, CA.
Ph.D. in Computer Science, expected graduation: March 2013.
Thesis title: Latent feature models for dyadic prediction.
C.Phil. in Computer Science: June 2011.
M.S. in Computer Science: June 2009.
 - ◇ **University of Sydney**, Sydney, Australia.
B.Sc. (Advanced) with Honours in Computer Science, November 2006.
Thesis title: *Random projections and applications to dimensionality reduction*.
 - ◇ **Awards and Scholarships**
 - *Jacobs Fellowship*, University of California San Diego, 2007 – 2009. Award given to best incoming PhD students in the Jacobs School of Engineering.
 - *Allen Bromley prize*, The University of Sydney, 2007. Awarded for best Honours thesis in School of Information Technologies.
 - *University Medal*, The University of Sydney, 2007. Selective award given to the top Honours students in the Faculty of Science.
- RESEARCH INTERESTS
- ◇ Collaborative filtering, link prediction, latent feature modelling, probability estimation, imbalanced classification, large-scale learning, random projections.
- REFEREED PUBLICATIONS
- ◇ A Machine Learning Framework for Programming by Example. Aditya Krishna Menon, Omer Tamuz, Sumit Gulwani, Butler Lampson, and Adam Tauman Kalai. *To appear in International Conference on Machine Learning (ICML) 2013*.
 - ◇ Learning and Inference in Probabilistic Classifier Chains with Beam Search. Abhishek Kumar, Shankar Vembu, Aditya Krishna Menon, and Charles Elkan. *In Machine Learning and Knowledge Discovery in Databases - European Conference (ECML-PKDD), 2012*.
 - ◇ Doubly Optimized Calibrated Support Vector Machine (DOC-SVM): an algorithm for Joint Optimization of Discrimination and Calibration. Xiaoqian Jiang, Aditya Krishna Menon, Shuang Wang, Jihoon Kim, and Lucila Ohno-Machado. *In PLoS ONE 7(11): e48823, 2012*.
 - ◇ Predicting accurate probabilities with a ranking loss. Aditya Krishna Menon, Xiaoqian Jiang, Shankar Vembu, Charles Elkan, and Lucila Ohno-Machado. *In International Conference on Machine Learning (ICML) 2012*.
 - ◇ Link prediction via matrix factorization. Aditya Krishna Menon, Charles Elkan. *In Machine Learning and Knowledge Discovery in Databases - European Conference (ECML-PKDD), Proceedings Part II, 2011*.
 - ◇ Response prediction using collaborative filtering with hierarchies and side-information. Aditya Krishna Menon, Krishna-Prasad Chitrapura, Sachin Garg, Deepak Agarwal, and Nagaraj Kota. *In Knowledge Discovery and Data Mining (KDD), San Diego, California, 2011*.
 - ◇ Fast algorithms for approximating the singular value decomposition. Aditya Krishna Menon, Charles Elkan. *In Transactions of Knowledge and Data Discovery: Special Issue on Large-Scale Data Mining (TKDD-LDMTA), Volume 5, Number 2, February 2011*.

- ◇ A log-linear model with latent features for dyadic prediction. Aditya Krishna Menon, Charles Elkan. In *IEEE International Conference on Data Mining (ICDM)*, Sydney, Australia, 2010.
- ◇ Predicting labels for dyadic data. Aditya Krishna Menon, Charles Elkan. In *Data Mining and Knowledge Discovery: Special Issue on Papers from ECML-PKDD, Volume 21, Number 2, 2010*.
- ◇ An incremental data-stream sketch using sparse random projections. Aditya Krishna Menon, Gia Vinh Anh Pham, Sanjay Chawla, and Tasos Viglas. In *Proceedings of the 2007 SIAM International Conference on Data Mining (SDM)*, Minnesota, USA.

PAPERS
PENDING
REVIEW
WORK
EXPERIENCE

- ◇ Privacy breach detection using collaborative filtering. Aditya Krishna Menon, Xiaoqian Jiang, Jihoon Kim, and Jaideep Vaidya. *Submission to ML4S 2012*.
- ◇ **Data Scientist Intern**, LinkedIn. June 2012 – Sep 2012. Worked with Data Science and Search Relevance teams on search log analysis. Helped devise end-to-end system for using machine learning to help automate analysis, from extracting data via Hadoop to collecting training labels to performing predictive analytics using machine learning models.
- ◇ **Intern**, Microsoft Research New England. June 2011 – Sep 2011. Worked on a new approach to repetitive text processing using programming by example, the paradigm where a user instructs a machine to perform a task by showing it an example. We showed how to use machine learning to perform efficient inference of the user's intent, thus significantly extending the scope of operations over prior systems. We implemented our ideas in a working prototype of the system, designed to run client-side on a web browser.
- ◇ **Intern**, Yahoo! Labs Bangalore. June 2010 – Sep 2010. Worked with the advertising sciences team on estimating the probability of an advertisement being clicked when displayed on a webpage. We showed how to approach the problem using techniques from the collaborative filtering literature. We further extended these techniques to exploit hierarchical information about webpages and advertisement, which led to significant performance increases.
- ◇ **Intern**, Infosys Bangalore. December 2005 – February 2006. Worked in the Grid Computing group in SETLabs on static analysis of code to detect parallelism opportunities. Refactored existing Java code base to make use of several design patterns. Developed code in Java, interfacing with the ANTLR and GraphWiz packages to create a visual display of dependencies inside Java code to be deployed on a grid.

SKILLS

- ◇ *Programming languages*: C, C++, C#, Java, MATLAB, OCaml, Python, Apache Pig.
- ◇ *Other*: Working knowledge of HTML, JavaScript and SQL. Developed code with Visual Studio .Net, Eclipse. Comfortable with Linux and Windows.

REFERENCES

- ◇ **Charles Elkan**. Professor, Department of Computer Science and Engineering, University of California, San Diego. Email: elkan@cs.ucsd.edu.
- ◇ **Sanjay Chawla**. Head of School, School of Information Technologies, University of Sydney. Email: chawla@it.usyd.edu.au.
- ◇ **Sachin Garg**. VP, Big Data Labs, American Express, Bangalore. Email: sachin.garg@aexp.com.
- ◇ **Adam Kalai**. Senior Researcher, Microsoft Research New England. Email: adum@microsoft.com.
- ◇ **Lawrence Saul**. Professor, Department of Computer Science and Engineering, University of California, San Diego. Email: saul@cs.ucsd.edu.