Wei Chu

Contact Information

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Personal Information

U.S. Permanent Resident
Nationality: P.R. China
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Research Interests

Statistical Machine Learning and Large-scale Data Mining

Education

Postdoctoral *Feb. 2003 – Jan. 2006*
Direction: Machine Learning
Gatsby Computational Neuroscience Unit, University College London, London

Ph.D. *Jul. 1999 – Jan. 2003*
Thesis: Bayesian Approach to Support Vector Machines
Dept. of Mechanical Engineering, National University of Singapore (NUS), Singapore

Master of Engineering *Sept. 1995 – Jan. 1998*
Major: Inertial Navigation Technology and Equipment
Harbin Institute of Technology, Harbin & The 3^{rd} Research Academy of China Aerospace Corporation (CASC), Beijing, P.R. China

Bachelor of Engineering *Sept. 1991 – Jul. 1995*
Major: Automatic Control
Harbin Engineering University, Harbin, P.R. China

Research/Work Experience

Scientist *Jan. 2008 – present*
Yahoo! Labs, Audience Science *Yahoo!, Santa Clara*
Developing learning algorithms for recommender systems in large-scale web-based services, including online decision making, contextual bandits for personalization, relational learning, and user click analysis in web content optimization and web search.

Associate Research Scientist *Jan. 2006 – Jan. 2008*
Center for Computational Learning Systems *Columbia University, New York*
In David L. Waltz's group, developed machine-learned ranking systems for failure detection in a large-scale industrial project contracted with the Consolidated Edison.

Research Fellow *Feb. 2003 – Jan. 2006*
Gatsby Computational Neuroscience Unit *University College London, London*
Supervised by Zoubin Ghahramani and David L. Wild, endeavored on statistical machine learning with applications to ranking and computational biology. I was promoted to *senior research fellow* since Feb. 2005.

Research Scholar *Jul. 1999 – Jan. 2003*

Dept. of Mechanical Engineering *National University of Singapore, Singapore*

Supervised by S. Sathiya Keerthi and Chong Jin Ong, I carried out doctoral-oriented research on Bayesian approaches to model selection in support vector machines for multivariate non-linear regression and classification.

Selected Publications

1. L. Li, W. Chu, J. Langford and X. Wang (2011), Unbiased offline evaluation of contextual-bandit-based news article recommendation algorithms, in *ACM International Conference on Web Search and Data Mining* (WSDM-04) 297-306
2. L. Li, W. Chu, J. Langford and R. E. Schapire (2010), A contextual-bandit approach to personalized news article recommendation, in *Proc. of International World Wide Web Conference* (WWW-19). 661-670
3. S.-T. Park and W. Chu (2009), Pairwise preference regression for cold-start recommendation, in *Proc. of ACM conference on Recommender Systems* (RecSys-03). 21-28
4. W. Chu and Z. Ghahramani (2009), Probabilistic models for incomplete multi-dimensional arrays, in *Proc. of International Conference on Artificial Intelligence and Statistics* (AISTATS-12). 89-96
5. W. Chu and S.-T. Park (2009), Personalized recommendation on dynamic content using predictive bilinear models, in *Proc. of International World Wide Web Conference* (WWW-18). 692-700
6. R. Silva, W. Chu, and Z. Ghahramani (2008), Hidden common cause relations in relational learning, in *Advances in Neural Information Processing Systems* (NIPS-20). 1345-1352
7. K. Yu and W. Chu, (2008), Gaussian process models for link analysis and transfer learning, in *Advances in Neural Information Processing Systems* (NIPS-20).1657-1664
8. P. K. Shivaswamy, W. Chu and M. Jansche (2007), A support vector approach to censored targets, in *Prod. of IEEE International Conference on Data Mining* (ICDM-07):655-660
9. W. Chu and S. S. Keerthi (2007), Support vector ordinal regression, *Neural Computation*, 19(3):792-815
10. W. Chu, Z. Ghahramani, A. Podtelezhnikov and D. L. Wild (2006), Bayesian segmental models for protein secondary structure and contact map prediction, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 3(2):98-113 [featured cover article]
11. W. Chu, V. Sindhwani, Z. Ghahramani and S. S. Keerthi (2006), Relational learning with Gaussian processes, in *Neural Information Processing Systems* (NIPS-19)
12. W. Chu, Z. Ghahramani, R. Krause and D. L. Wild (2006), Identifying protein complexes in high-throughput protein interaction screens using an infinite latent feature model, *Pacific Symposium on Biocomputing* (PSB-11). 231-242
13. S. S. Keerthi and W. Chu (2006), A matching pursuit approach to sparse Gaussian process regression, in *Neural Information Processing Systems* (NIPS-18). 643-650
14. W. Chu and Z. Ghahramani (2005), Gaussian processes for ordinal regression, *Journal of Machine Learning Research*, 6(Jul):1019-1041
15. W. Chu, Z. Ghahramani, F. Falciani and D. L. Wild (2005), Biomarker discovery in microarray gene expression data with Gaussian processes, *Bioinformatics*, 21(16):3385-3393
16. W. Chu, C. J. Ong and S. S. Keerthi (2005), An improved conjugate gradient scheme to the solution of least squares SVM, *IEEE Transactions on Neural Networks*, 16(2):498-501

17. W. Chu and Z. Ghahramani (2005), Preference learning with Gaussian processes, in *Proc. of the 22nd International Conference on Machine Learning* (ICML-22). 137-144
18. W. Chu and S. S. Keerthi (2005), New approaches to support vector ordinal regression, in *Proc. of the 22nd International Conference on Machine Learning* (ICML-22). 145-152
19. W. Chu, Z. Ghahramani and D. L. Wild (2004), A graphical model for protein secondary structure prediction, in *Proc. of the 21st International Conference on Machine Learning* (ICML-21). 161-168
20. W. Chu, S. S. Keerthi and C. J. Ong (2004), Bayesian support vector regression using a unified loss function, *IEEE Transactions on Neural Networks*, 15(1):29-44
21. W. Chu, S. S. Keerthi and C. J. Ong (2003), Bayesian trigonometric support vector classifier, *Neural Computation*, 15(9):2227-2254
22. W. Chu, S. S. Keerthi and C. J. Ong (2001), A unified loss function in Bayesian framework for support vector regression, in *Proc. of the 18th International Conference on Machine Learning* (ICML-18). 51-58

Professional Activity

- Program Committee Member
  ICML 2005, 2006, 2007, 2008; SIGIR 2009, 2010; ECML/PKDD Workshop 2008.
- Peer Reviewing for Conferences:
  NIPS 2006, 2007, 2008, 2009, 2010; ICML 2009, 2010, 2011; AISTATS 2009, 2010, 2011; ECML 2008; ESANN 2009; PSB 2007; WWW 2011
- Peer Reviewing for Journals:
  IEEE Transactions on Image Processing, KDE, NN, PAMI, Signal Processing, SMC-B
  Journal of Machine Learning Research, Machine Learning Journal, Neural Computation, etc.
- Fellow at the Institute for Pure and Applied Mathematics, University of California, Los Angeles, in the Spring Program "Proteomics: Sequence, Structure, and Function", Apr. 2004 - Jun. 2004.

Honors and Awards

- ◇ Best Paper Award of ACM WSDM 2011.
- ◇ Yahoo! Patent Milestone Award 2010.
- ◇ Yahoo! Superstar Team Award 2008, the highest achievement award in the company.
- ◇ Honorable mention on the KDD Cup 2002, team member of NUS.

Computer Skills

- ◇ Languages: C, C++, Matlab, Unix Shell Scripts, Python, LaTeX
- ◇ Operating Systems: Unix/Linux, Windows and Map-Reduce

References

Available upon request.

Date: 2011/03/28 19:27:33 Wei Chu at Santa Clara, CA