

CURRICULUM VITAE

Kuan-ming Lin

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Education

Ph.D. candidate in Computer Science and enroller in the Certificate Program in Computational Biology and Bioinformatics, Duke University, 2004 to present
Advisor: Lawrence Carin. Research group: Duke EE Machine Learning Group.

Master of Science, National Taiwan University, Taiwan, 2000 to 2002
Major: Computer Science and Information Engineering. Adviser: Chih-Jen Lin.

Bachelors of Engineering and Science, National Taiwan University, Taiwan, 1996 to 2000
First Major: Computer Science and Information Engineering. Second Major: Mathematics.

Research Interests

Massive biological data analysis, Bayesian modeling, data mining, cryptography, algorithms.

My current research focus is to learn Bayesian nonparametrics and apply it to clinical applications such as prediagnosis of human acute infections.

Publications and Theses

Kuan-ming Lin and Jaewoo Kang (2007). **Exploiting Inter-gene Information for Microarray Data Integration**. In *Bioinformatics Session, Proceedings of the ACM Symposium on Applied Computing*, pp. 123-127.

Kuan-ming Lin, Jieru Zheng, and Ji Zhang (2006). **Automatic Structure Prediction of HIV Coreceptor CCR5**. *Proceedings of Bioinformatics in Taiwan Symposium*.

Chien-Chung Huang, Kuan-Ming Lin, and Lee-Feng Chien (2005). **Automatically Training Corpora Acquisition through Web Mining**. *Proceedings of 2005 IEEE/WIC/ACM Conference on Web Intelligence*.

Kuan-Ming Lin and Chih-Jen Lin (2003). **A Study on Reduced Support Vector Machines**. *IEEE Transactions on Neural Networks, Volume 6*, pp. 1449-1459.

Kuan-ming Lin (2002). **Reduction Techniques for Support Vector Machines**. Master's thesis, National Taiwan University, Taiwan.

Honors and Awards

Final Contestant Prize, Hewlett-Packard Taiwan IA-Design Contest, 2000.

Presidential Award, National Taiwan University, 1996 to 1998.

Bronze Medal, 37th International Mathematics Olympiad (IMO), Mumbai, India, 1996.

Teaching and Research Experiences

Fall 2005 to Fall 2006 Research Assistant to Dr. Jaewoo Kang, Data Integration and Mining Research Group, Computer Science Department, North Carolina State University

Focuses on integrating biological database maintenance/query, which is an inter-disciplinary project across the fields of database (integration and optimization) and bioinformatics (genome analysis). Yielded a publication in March 2007.

Spring 2006 Teaching Assistant for Software Design and Implementation, Duke University

Helped students in evolving their own group projects, and assisted in grading them.

Fall 2005 Teaching Assistant for Introduction to Database Systems, Duke University

Established a MySQL+PHP+Apache example platform term projects. Also responsible for grading assignments and writing sample solutions.

Fall 2001 Teaching Assistant for Statistical Learning Theory, National Taiwan University

Responsible for grading assignments. Also worked with the instructor on final grading.

Selected Coursework (since 2005)

Spring 2005

CPS 216: Advanced Database Systems

CPS 240: Computational Complexity

CPS 296: Computer and Network Security

Fall 2005

CPS 260/BGT 204: Algorithms for Computational Biology

STA 293.03: Statistical Learning – Algorithms and Theory

Spring 2006

STA 270/BGT 200: Statistical Methods for Computational Biology

STA 221.01/BA 510: Bayesian Inference and Decision

Summer 2006

The 2006 International Machine Learning Summer School, Taipei, Taiwan

Fall 2006

CPS 261/CBB 231: Computational Biology of Gene Regulation

CBB 210: Computational Biology Seminar (opened every semester and required for certificate)

Spring 2007

CPS 296: Algorithms in Structural Molecular Biology (audit)

Selected Submitted Works

Kuan-ming Lin, Yen-Ting Lin. **A Study on the Greedy Algorithm for General Feature Selection Problems**, May 2005.

Kuan-ming Lin, Jung-Ying Wang, and Chih-Jen Lin. **Protein Secondary Structure Prediction Using Support Vector Machines**, December 2001.

Employment History

Research Assistant **IIS, Academia Sinica**
January 2004 to August 2004; May 2005 to July 2005 **Taipei, Taiwan**

Worked for the Web Knowledge Discovery (WKD) laboratory in the Institution of Information Science (IIS), focusing on new approaches to implement concept search engines. Assisted in the implementation and extension of LiveClassifier, an on-line system that automatically trains classifiers through Web corpora (e.g. search engine output) instead of manually-labeled corpora. Also gave short lectures on Machine Learning to lab members.

Second Lieutenant, Program Design Officer **Military Service**
July 2002 to January 2004 **Kaohsiung, Taiwan**

Responsible for all IT-related tasks and the quality of network services, such as Microsoft Active Directory, Microsoft Outlook, Microsoft SQL Server 2000, Microsoft Access, Microsoft IIS web server, and ISS firewall. The users are officers and assistants in a military command with about one hundred computers. Also designed the announcement system for the command.

Part-time Researcher **Castles Technology**
July 2000 to August 2001 **Taipei, Taiwan**

Worked in the R&D section to write USB and PS/2 drivers for Smartcard reader devices. Wrote the first Linux drivers for EZ Smartcard reader series. Assisted in Smartcard reader function and testbed API design. Gave lectures on security functions for Smartcards.

Selected Extracurricular Activities

Event Organization Manager **Duke Taiwanese Student Association**
January 2005 to January 2006 **North Carolina, USA**

Responsible for organizing Taiwanese Student Association events, including orientations, welcome receptions, festival celebrations, farewell parties, and other events in coordination with the International House at Duke University.

Finance Manager **Departmental Student Association, National Taiwan University**
May 1998 to May 1999 **Taipei, Taiwan**

Responsible for collecting dues from students and monitoring the income/cost of the association. Initiated and posted monthly financial reports open to all computer science students, which was not done before my entrance. Also participated in monthly and other major meetings of the association.