PHILIP A. ZIGORIS

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Education

M.Sc., Computer Science, University of California, Santa Cruz — December 2006
- Thesis title: *Improved Traitor Tracing Algorithms*

B.Sc., Computer Science, Cornell University — Winter 2003

Experience

Research Engineer, IBM Almaden Research Center — Summer 2006 - Present
- Significantly improved performance in core Content Protection technology using statistical machine learning methods.
- Implemented, in Java, an extensible Bayesian Network toolkit.

Graduate Research Assistant, UC Santa Cruz — Summer 2005 - Present
- Developed novel learning algorithms for effectively handling noisy data.
- Developed a hierarchical user model that securely leverages information from exisiting users to alleviate poor performance with new users.

Research Assistant, Cornell University — Summer 2003 - Summer 2004
- Implemented, in C, a new algorithm for learning sequence alignment parameters ($\text{SVM}^{\text{align}}$) and dependencies between classes for multi-class learning.

Undergraduate Research Fellow, California Institute of Technology Summer 2002
- Developed an interpreted functional language for specifying semi-autonomous robot behavior for the Robo-Flag testbed.
- Research team won the summer-end Robo-Flag competition.

Software

$\text{SVM}^{\text{align}}$: Standalone program for learning sequence alignment parameters with Support Vector Machines.

cost.boost: Implementation of standard and cost-sensitive boosting methods; distributed as package for R.

Patents

with Hongxia Jin, Jeff Lotspiech. *System, method, and service for tracing traitors from content protection circumvention devices.* 2006 (Pending)

Publications

with H. Jin, *Bayesian Methods for Practical Traitor Tracing*, Submitted to Applied Cryptography and Network Security 2007.

with D. Eads, *Unsupervised Learning of Tree Alignment Models for Information Extraction* , Workshop on Ontology Mining and Knowledge Discovery from Semi-Structured Documents, ICDM 2006.

with Y. Zhang, *Bayesian Adaptive User Profiling with Explicit & Implicit Feedback*, Conference on Information and Knowledge Management, 2006.

with D. Helmbold, N. Bobb, *Biboost for Asymmetric Learning*, UCSC Technical Report, 2006.

Advanced Coursework

Machine Learning, Algorithm Design and Analysis, Natural Language Processing, Bayesian Statistics, Optimization Theory and Applications, Random Processes.

Skills

Java, C++, Python, Perl, shell scripting, Matlab, R