Matthew D. Boardman, B.Eng., MCSc.

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Experienced, knowledgeable and professional: a singular combination of ten years of large-scale systems development experience, data warehouse consulting, technical team leadership and project management, with recent academic experience in the latest innovative data mining and computational intelligence research. A Master's Degree in Computer Science, with a Research Thesis exploring the practical application of modern machine learning methods to applications in computational neuroscience, bioinformatics, electroretinography and clinical psychiatry.

PROFESSIONAL EXPERIENCE

Dalhousie University, Halifax, Nova Scotia, May 2005 – Current.

- *Research Assistant* in the Computational Neuroscience Group, using numerical analysis tools such as Matlab to prototype new machine learning techniques. *Teaching Assistant* for graduate and undergraduate computer science classes in data mining and data warehousing; responsible for grading assignments and term papers, and holding biweekly tutorials.

- *Research Associate* for the retinal electrophysiology laboratory at the **IWK Health Centre,** Atlantic Canada's largest children's hospital. Responsible for the design and development of a Matlab graphical application for pattern electroretinography waveform analysis, in conjunction with Dalhousie University's interdisciplinary Computational Neuroscience Group and the Faculty of Medicine.

Adastra Corporation, Markham, Ontario, October 2003 – June 2004.

- *Business Intelligence Consultant* (**Shoppers Drug Mart**). Aided in tool selection for business intelligence roadmap for corporate headquarters by creating formal comparison methodology to compare relative capabilities, technical features and performance in the categories of Database Management Systems; Extraction, Transformation and Loading; and Data Quality Assurance. Assisted in requirements development and implementation of a proof-of-concept project using Informatica PowerCenter, to load nationwide point-of-sale transactions to a customer loyalty data mart.

- *Business Intelligence Consultant.* Supported business development and technical pre-sales activities, including assisting with several technical proposals, high-level customer presentations and Statements of Work for large Canadian and international retail, health services, banking and telecommunications corporations. Projects included creation of a reference Supply Chain data model to expedite data integration and data warehouse development for related business intelligence projects, with focus on manufacturing and retail industry verticals, including data mappings and transformation logic with supporting technical documentation, and providing technical assistance for marketing literature.

Celestica International (Information Technology), Toronto, Ontario, August 1999 – August 2003.

- *Data Warehouse Team Leader.* Technical team leader and project manager; responsible for architecture design, development and international deployment of a large-scale, high-volume electronics manufacturing Shop Floor Data Warehouse for several simultaneous deployments in Canada, the United States, Great Britain, Mexico and Ireland. Team leadership responsibilities included critical evaluation and skill development of over twenty team members, candidate interviews and subsequent staffing decisions. Project management responsibilities included a multi-million dollar capital budget, time management and communication to senior corporate management and to site general managers.

- *Data Warehouse Specialist.* Senior member of development team; responsible for technical leadership, architecture design and application development for 24 hour / 365 day continuous operation of global Supply Chain Management Data Warehouse. Technology environment included Oracle Database 8i and 9i, PL/SQL, Oracle Forms and Reports, Oracle Designer, Oracle Warehouse Builder, Oracle Application Server and Unix shell scripts. Projects included design, development and implementation of several key data warehouse applications, including a regional sourcing and inventory tracker for global commodity managers; a reporting mechanism with multiple large-scale output formats for financial analysts; a financial application using Activity Based Costing methodology to model manufacturing processes for new products and quarterly customer negotiations.

Celestica International (Toronto Manufacturing), Toronto, Ontario, May 1994 – July 1999.

- *Senior Associate Engineer.* Responsible for applications development supporting memory module manufacturing and test engineering using C/C++ and Java. Projects included development of a TCP/IP communications interface for Advantest 5581 memory test hardware controlled by Sun Solaris workstations with robotic product handlers; a web-based electrical schematics and build specifications display system for product engineers using IBM DB2; a flexible communications interface for product control transactions to plant-wide manufacturing data collection system; an early warning tester monitoring system to detect abnormally high failure rates in real time; development of plant-wide product barcode labeling system.

EDUCATION

2006 Master of Computer Science, Dalhousie University, specializing in Computational Intelligence.
1999 Six of nine courses completed for Master of Computer Engineering, University of Toronto.
1996 Bachelor of Electrical Engineering, Technical University of Nova Scotia, with Distinction.

Professional Affiliations

2006 Student Member, Institute of Electrical and Electronics Engineers (IEEE).
1999 Professional Engineer (P.Eng.), Professional Engineers Ontario.

Awards

2006 Conference session chair for Support Vector Machines and Kernel Methods II (IJCNN 2006).
2006 Student Travel Grant, IEEE Computational Intelligence Society.
1998 Celestica Significant Unlimited Solution for substantial cash savings ($2.2 million annually).
1997 Celestica Merit Award for significant technical achievement.
1996 Sexton Scholar, Technical University of Nova Scotia.
1994 Undergraduate NSERC (Declined).
1993 Department Scholarship, Technical University of Nova Scotia.
1991 APENS Award, Association of Professional Engineers Nova Scotia.
1991 Percy B. Jollota Scholarship, Dalhousie University, Faculty of Engineering.

Publications

M. Boardman, S. Ironside, T. Trappenberg and P. Corkum, "Support Vector Classification Shows Sleep Effects of Ritalin on Children with ADHD" (Poster Presentation), *Dalhousie Department of Psychiatry 16th Annual Research Day*, Halifax, Nova Scotia, October 2006.

M. Boardman and T. Trappenberg, "A Heuristic for Free Parameter Optimization with Support Vector Machines," *Proceedings of the 2006 IEEE International Joint Conference on Neural Networks,* Vancouver, British Columbia, July 2006.

M. Boardman, "Extrinsic Regularization in Parameter Optimization for Support Vector Machines" (Master's Thesis), Faculty of Computer Science, Dalhousie University, June 2006.

M. Boardman, "Push Button 64," *Compute! (Gazette Supplement)*, No. 149, February 1993.