

MATTHEW J. H. RATTIGAN

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EDUCATION

University of Massachusetts Amherst, Amherst, MA. Ph.D. candidate, Department of Computer Science (expected graduation: Summer 2011). Research assistant in the Knowledge Discovery Lab, with a concentration on causal social network analysis and relational data mining.

Wesleyan University, Middletown, CT. B.A., Spring 1997. Major in Mathematics-Computer Science.

PROFESSIONAL EXPERIENCE

Comcast Interactive Media, Philadelphia, PA
Summer Intern, Summer 2007-Winter 2007.

Led independent research and development projects to enhance the quality and features of a commercial entertainment web portal. Example projects:

Six-degree connector — Improved back end database code for creating relational links between movies and television programs sharing common actors or user-supplied tags. Defined similarity measures to provide meaningful rankings. Optimized database queries to improve performance and enable online use of a database consisting of ~1.5 million objects, 4 million links.

Hollywood zeitgeist measurement — Created a system to analytically measure which actors are “hot” for a given time period. Using film ranking and sales data, the graphical proximity of each actor to a “popularity core” was calculated over time.

Movie scoring evaluation — Completed an evaluation of an internally used ranking system for movies. Demonstrated a quantifiable temporal bias and suggested ways to eliminate its effect on scores.

Movie and tag relational clustering — Implemented a system for performing relational agglomerative clustering of movies and the user-supplied tags that describe them. Movies were clustered by genre, subject matter, or cast (e.g., “westerns”, “golf movies”, “Raul Julia movies”). Tag clusters provided a hierarchical representation of tag similarity based on their application to common films.

Upromise, Brookline, MA
Senior Reporting Analyst, Fall 2000-Fall 2001.

Provided executive-level decision support reporting and analysis for a rapidly growing web-based startup. Responsible for supervising data acquisition, warehousing, and mining. Example projects:

Customer acquisition optimization — Provided a data-driven framework to aid web site design. Analyzed web logs to identify customer acquisition bottlenecks and suggested design strategies for increasing sign-up rate.

Performance reporting — Implemented an automated reporting system to provide weekly financial performance summaries. Multiple data streams were parsed and warehoused in an Oracle database.

Ask Jeeves / Direct Hit Technologies, Natick, MA
Senior Data Analyst, Spring 1999-Fall 2000

Worked as a data analyst and software engineer for a company producing a third-generation Internet search engine. Performed theoretical analysis of products, implementation of new technologies, and dissemination of relevant findings. Project highlights include:

Performance Metrics — Developed a suite of metrics to measure accuracy of query results and gauge overall response rate. Apache log files are parsed, processed, and loaded into a SQL Server database, where a series of reports is generated.

Query Synonym Generation — Created a series of programs that analyze data generated from hundreds of millions of web searches and generates lists of synonymous queries.

Web User Behavior Study — Designed and implemented an automated user behavior study to determine the efficacy of different search techniques and features from an end-user perspective.

Decision Architects / The Monitor Company, Cambridge, MA

Decision Support Consultant, Summer 1997-Spring 1999

Served as the technical lead on case teams in the United States and Europe. Responsible for supplying appropriate technical solutions to strategic business problems, while communicating regularly with clients and other case team members. Sample projects include:

Sales Network Optimization — Led a two-person development team in an effort to redesign a 3,200-store sales network for a Swiss client. Designed algorithm for optimizing network according to different input parameters and market scenarios.

Contract Analysis Tool — Created a spreadsheet tool that linked contract retention/acquisition to overall shareholder value for strategic planning in the gaming industry. Regularly met with clients for demonstrations and review in order to assure the usefulness and longevity of the tool.

ETC.

Experience with Java, C/C++, Python, Perl, PHP, Javascript, HTML, SQL.

I once played in a steel band. I can beat you at soccer, and speak some Italian.