

**Jim Wang**  
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**Education/Status:**

- 1 Ph.D. Statistics (1995), Carleton University, Canada
- 2 M.Sc. Applied Mathematics (1987), Tsinghua University, China
- 3 B.Sc. Applied Mathematics (1984), Tsinghua University, China
- 4 Permanent resident (green card) of USA

**Modeling/Computer Skills:**

- 1 Time-series, Logistic regression, cluster analysis, CHAID (decision tree), GEE, discrete choice, factor analysis (principal component, common factor), market basket analysis, survival (hazard) model/analysis, neural network, Bayesian method
- 2 SAS (Base, Stat, Miner, Macro, Proc SQL, IML graphic etc.), Matlab, SPSS (including syntax), C/C++(under both UNIX and PC), SQL (query, procedure), Perl, Batch, Tcl/Tk
- 3 data mining tools (SAS Enterprise Miner, AnswerTree, Scenario), Access, Excel, PowerPoint, html, Unix (Solaris, hp), Linux, Window 2000/NT, Mainframe(MVS TSO).

**Experience:**

03/2006-Present: Senior Analyst, R&D Department, VNU(AcNielsen) Marketing Information

-Use multi-dimensional ARIMA to forecast gross investment and revenues trends by using their history trends and other related time-series such as interest rate, prices etc.

-Forecasted sales trend (time-series) by using history sale and time-series of price, income, spending etc. Also managed project design, objective, deliverable scope, process flow and timeline, identified the appropriate modeling methodology and concluded summary of findings and action. Processed and analyzed CPG data and modeled out of stock event based on store history data and product category.

03/2004-03/2006: Project Manager/Manager, Discover Financial Service, Chicago, IL

**Risk Management Projects:**

-Credit line management project: Planned, designed, and finalized project plan with Strategy Planning group to determine project objective, data selection criteria, timeline of model development and implementation. Developed statistical models to predict net benefit of credit line reduction to high-risk accounts. Tested models on other data set. Worked with production team to implement the model score into production system. Present the result to senior management and user team. Managed the project from end to

end, and delivered the project on time with expected quality.

-Developed and managed portfolio risk models to predict short term and long term delinquency/charge-off. The models were developed using account status, transaction history and credit bureau attributes. Provided segmentation analysis through combination of business requirement and data mining. Segmentation was conducted through decision tree, principal component analysis. Made actionable suggestions to senior management and other business units regarding account behavior characteristic. Managed resources to deliver the project on time and meet expectation. Methodology: Decision tree, cluster analysis, principal analysis, and multinomial logistic regression.

Responsible for Enterprise Value project:

- Predictive model: Developed following models using credit bureau attributes and demographic information: 1) account gross activity; 2) sale amount; 3) balance transfer; 4) good open balance; 5) delinquency 60 days+; 5) net income in year 1 & 2.; 6) number of merchants;7) revolver balance.

- Optimization: Used the combination of operations research (SAS Proc NLP) and statistical predictive modeling to derive optimal marketing campaign offers when constraints (approval rate, minimum sale, fico score etc) are present. Each prospect receives one of the offers based on the maximum likelihood to respond.

-Optimize account activity under the constraints of mail quantity, response rate, risk score etc. 2) optimize enrollment rate under the constraints of mail quantity, sale volume, risk and predicted balance.

Consultant/Contractor Experience:

06/2000-03/2004:

Projects for SBC Communications, Inc.

-Developed DSL subscriber model using logistic regression, decision tree and cluster analysis. Completed pre-study and post-study profile and summary report. Score the prospects data.

Projects for TAP Pharmaceutical Inc.

-Wrote and reviewed statistical analysis plan for clinical trials study (Phase I-III). Proposed and confirmed appropriate statistical methodology to compare different treatments, and trend analysis (over time and over dose level).

-Programming in SAS to retrieve data using SQL from clinical database management system, join/merge different clinical data to create data for statistical analysis/report, create and verify tables for final reports. Conduct validation of SAS program and summary report.

Projects for Cratos Networks, Inc., Tiburon Networks, Inc. and Sycamore Networks, Inc., Boston, MA

-Segmented (decision tree, cluster) cell phone and long distance calling pattern. Developed predictive model for customer retention and loyalty analysis (churn pattern). Modeled

cross-sell and conducted association analysis using market basket approach. Retrieved data via SQL and analyzed data using SAS and data mining tools.

-Conducted reliability analysis for network management system (Bayesian analysis).

01/1999-06/2000: Marketing Specialist, Marketing Information and Decision Support, Harris Saving & Trust, Chicago, IL

-Modeled (predictive model) account balance diminishment using both behavior and external information. Conducted logistic regression, neural network, cluster, decision tree, factor analysis and cross sale analysis. Summarized extensive account information over one and a half year period. Derived behavior variables for modeling and appended demographic and other general information, tested model and scored database.

01/1998-01/1999: Senior Statistician, Strategic Service Group, Executive Marketing Services, Inc., Chicago, IL

-Customer data profiling, retention analysis, statistical modeling (logistic regression, gain table generation, model verification, scoring files).

Experience in Canada:

09/1996-09/1997: Statistical Consultant

Project for Canada Trust: Logistic regression modeling of loan attrition risk.

Project for Nortel Networks, Inc.: Analyzed the quality improvement and market segmentation data using cluster and factor analysis that help to identify the typical features of product & service.

Research/Teaching Experience:

12/1995-09/1996: Assistant Professor, Faculty of Medicine, Memorial University of Newfoundland, Canada

-Full-time faculty: analysis of clinical trial data, bio-statistics research and teaching.