



The American Statistical Association

San Francisco Bay Area Chapter

Since 1928

September, 1997

Joint Biostatistics and General Applications Program

"Some Applications of Data Mining Tools in Database Marketing"

Jianmin Liu, Bank of America

Abstract

This paper presents some results of an empirical study on database marketing using CART, artificial intelligence-based algorithm (AI) and Logit model. The robustness of the three different approaches is evaluated using a large dataset. This study attempts to develop an analytical framework for database marketing. The goal is to establish a set of criteria for identifying potential customers of electronic commerce(EC). The selected criteria need to reflect the dynamics of market structure, demand for EC, new technology and, most importantly, the difference in various characteristics between prospect and non-prospect customers of EC. Using econometric and data mining techniques, it is found that there exist some patterns in customer profile associated with customers' response to EC. Successfully identifying these patterns is the core of the task.

Date: Tuesday, September 23, 1997

Time: 3:30 - 4:00 PM Refreshments
4:00 - 5:00 PM Discussion

Place: Nursing Building Room N721, UCSF campus

Dinner: 6PM, place to be announced at talk

Directions: See map. A map and directions are also available from links at <http://www.ucsf.edu/campus/maps>. There is public parking available for \$2/hr in the Murray Student Union garage, across the street from the hospital entrance.

Officers for 1997-1998

The chapter's officers for the 1997-1998 year are:

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Becton-Dickinson

President-Elect:

Ying Lu
University of California,
San Francisco

Vice President for General Applications

Ding Li
Bank of America

Vice President for Biostatistical Programs

Hina Malani
Center for Applied Statistics

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Jim Lenihan
Trilogy Consulting Corporation

Secretary

Ann Kalinowski
Failure Analysis Associates,
Inc.

We wish to thank outgoing chapter president Kathleen Lambourn for her leadership this past year.

Message from the Chapter President

In the four years I've been associated with the Bay Area ASA, I've seen the efforts of the chapter gradually shift to serve the local statistics community in new ways that, traditionally, have not been the purview of either our local universities or

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the national ASA organization. The most obvious example of this evolution has been the emergence of the chapter newsletter and web site as prime resources for local employers and job seekers in statistics. Over the next two years, we would like to begin a new initiative to sponsor a series of occasional continuing education workshops to be offered locally. The main goal of this initiative is to provide a means for practicing statisticians to keep up to date with recent advancements in statistical research and computing technology without having to leave the Bay Area. A workshop might also serve as a forum for exchanging or learning practical techniques, especially those not usually covered in the university curriculum.

Currently we are soliciting input from chapter members on whether you'd consider attending a local workshop, and on what topics you'd most like to see addressed. Here are a few possibilities, just to stimulate your imagination:

- Bioequivalence
- Survival analysis in clinical trials
- Wavelets
- Data mining
- Meta-analysis
- Recursive partitioning and CART
- Statistical pattern recognition and neural nets
- Quality control
- Data visualization

The format of the workshops is also open to suggestion: they

could range anywhere from an afternoon of lecture and discussion to a two-day, intensive short course with hands-on computer training. I encourage you to contact either me or President-elect Ying Lu with your ideas on either format or topics. My phone number is (408) 954-2583, e-mail mike@sfasa.org; Ying can be reached at (415) 502-4596 or ying@sfasa.org.

Of course, we'll also need to identify instructors and workshop leaders. Please contact us if you would like to submit a proposal for teaching a workshop or if you can suggest a potential instructor.

---Mike Locke, President

Message from the Chapter Secretary

The printing and mailing costs for the chapter newsletter are by far the most expensive items in the chapter budget. Last year the longer newsletters cost around \$700 to produce. Postage alone for the 550 people on the chapter mailing list is around \$176. The rest of the charges result from the number of pages in the newsletter, which is comprised mostly of employment opportunities advertising. Until late last spring, employment ads were printed without charge. To cut down the newsletter costs, I have taken three

approaches with the approval of the other officers:

- 1) Instituted a charge for employment ads to cover our production costs both for the newsletter and for our web site. (See schedule of costs later in the newsletter.)
- 2) Researched duplication services which could give the chapter a good rate for newsletter production.
- 3) Identified persons on the mailing list who have not paid chapter dues in over a year. This identification is complicated by the fact that the membership dates obtained monthly from the national organization may range over 6 months or more.

We believe that these changes will decrease newsletter costs and still provide the services desired by both our subscribers and our advertisers at a reasonable charge.

If you have any comments or further suggestions on how we can improve the newsletter and/or cut costs, or if I have misclassified your membership status, please contact me at sfamk@fail.com or (650)688-7203. You may also post to the webmaster at <http://www.sfasa.org>.

--Ann Kalinowski, Secretary

Seeing stars *****???

If you see a set of *****s next to your name on the mailing label, our records indicate that you have not paid chapter dues

since December 1995. This will be your last newsletter unless you pay your annual chapter dues of \$9 (\$3 student with verification of status).

Please make your check payable to the SF Bay Area Chapter of the ASA, and mail it to James Lenihan, Chapter Treasurer, at 15 Moonlight Court, South San Francisco, CA 94080.

Open Positions

Research Analyst

Allstate Research & Planning Center

Menlo Park CA

Mid-Peninsula research organization has immediate opening for a Research Analyst in our Insurance Research Group. The successful applicant will have a BA/BS in Economics, Business, Math or Statistics with a minimum of 2 years work experience in a business environment. He/she should have strong analytical, structured programming skills (PL/I desirable) and a working knowledge of mainframe and PC statistical software (SAS or SPSS). Excellent written and verbal communication skills are essential and insurance industry knowledge is a plus. Responsibilities include project development, programming, statistical analysis, report generation, data base building and maintenance. The Company pro-

vides excellent starting salary, pleasant working conditions and a broad package of employee benefits. EOE.

Send resume and cover letter to:

Human Resources

Allstate Research & Planning Center

321 Middlefield Road

Menlo Park CA 94025.

Phone (650)833-6253, Fax

(650)324-9347 E-mail

bcott@allstate.com.

Statistical Analysis Group Manager

Dade Microscan Inc.

West Sacramento CA

Dade MicroScan Inc. provides clinical diagnostics products and services to customers around the world, and we are part of a 5,500+ employee organization with sales of more than \$1 billion a year. We have an immediate opening for an energetic and motivated Group Manager for its Statistical Analysis Group.

The qualified candidate must possess a M.S. or Ph.D. in Statistics or a related field. The individual must have more than five years of experience in applied statistics in a healthcare industry. Managerial experience of two to five years is strongly desired. This individual will provide technical and

administrative direction to five to ten employees performing sophisticated analysis, developing experimental design tools and algorithms for a microbiology product. Leadership, communication and interpersonal skills are essential.

If you feel that you have the skills we need, please submit your resume and salary history to:

Human Resources Representative

Dade International, Inc.

1584 Enterprise Blvd.

West Sacramento, CA 95691. We are an equal opportunity employer m/f/d/v.

Systems Administrator; SAS Analyst/Programmer William E. Wecker Associates

Novato CA

William E. Wecker Associates, Inc. provides consulting services in applied mathematics and statistics to clients including Fortune 500 companies, financial institutions and government agencies.

This is a dual responsibility position:

- Systems Administrator function involves UNIX and Macintosh hardware and software installation and maintenance, including applications software, large

datasets, administrative and network functions and internal consulting

- Analyst/Programmer function involves working closely with senior consultants on data analysis assignments using SAS and other applications in a UNIX and Macintosh environment.

Desirable qualifications include:

- Bachelor's or Master's degree in statistics, mathematics, computer science or related field
- Strong problem solving skills
- Experience with SAS; experience with S-Plus and/or Mathematica a plus
- Experience with UNIX; experience with AIX a plus
- Familiarity with general business software (spreadsheets, graphics, word processing)
- Ability to work under deadlines

We are located in Novato, thirty minutes north of San Francisco.

Applicants should fax or mail resume and most recent university transcript to the following address. No telephone calls please.

Susan Hendrie-Marais

William E. Wecker
Associates, Inc.

505 San Marin Drive

Novato, California 94945

Fax: 415 898-2260

Gary Harvey

Harvey@wecker.com

415-898-2255 phone

415-898-2260 fax

Biostatisticians

Environmental Risk Analysis, Inc.

San Mateo, CA

Environmental Risk Analysis, Inc. (ERA) is a growing consulting firm that offers services in biostatistics, epidemiology and health risk assessment. Applied research for regulatory and litigation support composes the majority of our work. We seek superior professionals for the following positions:

Senior Biostatistician: Ph.D. 4+ years of experience (preferably in consulting) in the use of statistics and epidemiology in quantitative health risk assessment for environmental and occupational agents; consumer products; pharmaceuticals; and medical devices.

Biostatistician: M.S. with experience (prefer 1+ years) in executing and leading data analyses using SAS on large epidemiologic data sets; prefer experience in linear models, survival analysis, categorical analysis and epidemiologic methods.

Both positions are located in our San Francisco-area office and offer competitive

compensation. Please send a confidential application to:

William J. Butler, Ph.D.

Environmental Risk Analysis, Inc.

1670 So. Amphlett Blvd.,
Suite 115 San Mateo,

CA 94402 FAX: 415-655-7281.

Equal Opportunity Employer

Advertising Rates

Employment ads

Employment ads *must* describe a *specific* job opportunity: company, location, and job description.

For one newsletter insertion (250 words or less) and 2 months on chapter Web page *per job description*

\$50

General ads

These ads include general recruitment by employment agencies, consulting firms offering their services, etc.

For one newsletter insertion, *no* insertions on Web page

full newsletter page: \$200

half newsletter page: \$100

quarter newsletter page \$50

eighth newsletter page \$25

To place an ad, please contact the chapter secretary, Ann Kalinowski, at phone(650) 688-7203 or e-mail sfamk@fail.com.

Directions to UCSF

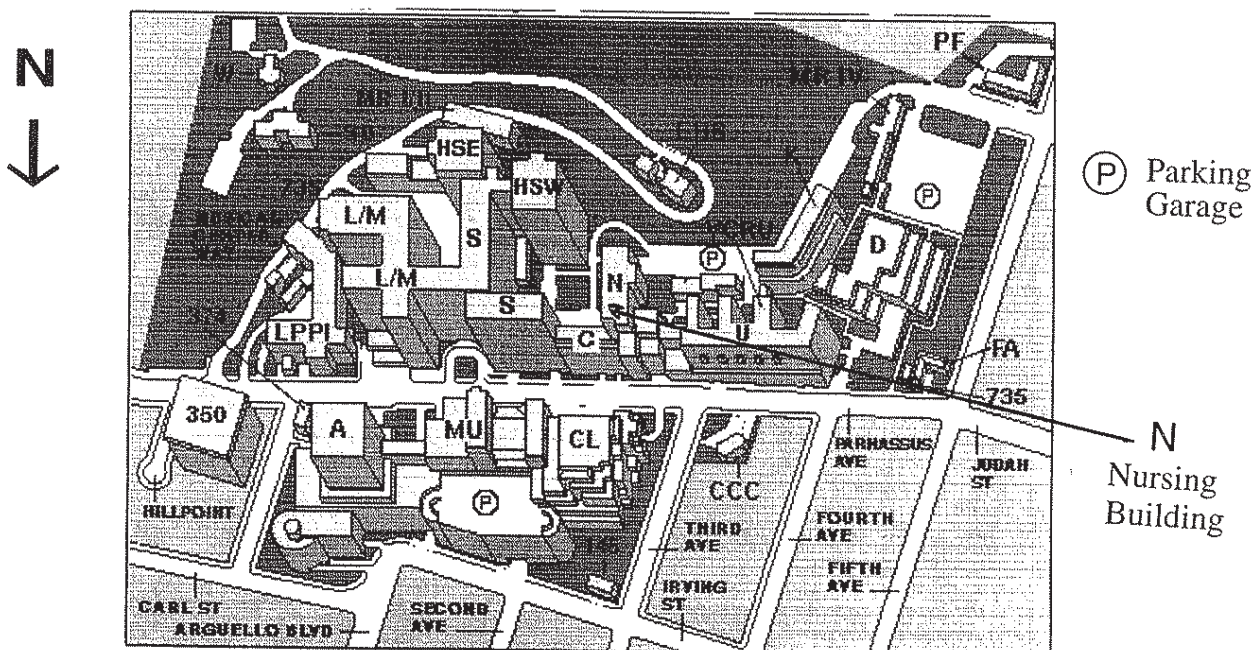
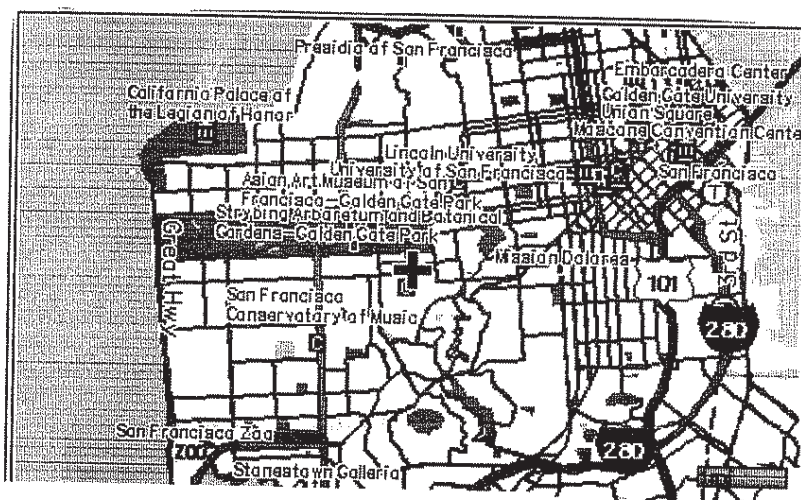
From the East Bay, take 101 south to the Fell Street exit. Stay in the right lane of Fell street for about 2 miles, to where the panhandle meets Golden Gate Park. Stay straight in the rightmost lane where Fell St. veers to the left at Golden Gate Park. At the stop sign, turn left onto Stanyan. Go up hill and turn right on Parnassus.

From the South Bay, take 101 north to Ninth St/Civic Center. Stay in the left lanes and exit on Fell St. Follow the direction above.

From the Peninsula, take 280 north. Stay in the left lanes and take the Golden Gate Bridge exit onto 19th Ave. Proceed in the right lanes and turn right (east) on Judah St. Judah turns into Parnassus at 5th Ave.

From Marin and Sonoma Counties, take the 19th Ave. exit about 1/4 mile after the

Golden Gate Bridge toll plaza. This is Park Presidio Dr. Stay in the right lanes passing through Golden Gate Park onto 19th Ave. No left turns are allowed on 19th Ave. Go three blocks on 19th, turn right on Kirkham right on 20th, and right (east) on Judah. Judah turns into Parnassus at 5th Ave.



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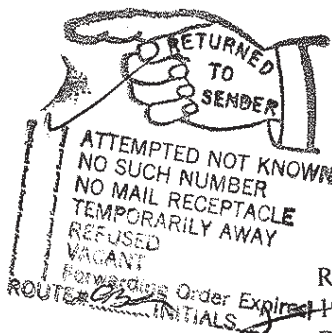


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