Christopher Seaman

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Experience

Experimental Design & Analysis 2012 - *Present*
eBay Inc.
Designed methodologies for generative research on web-scale data. Created and extended analytical, segment-based tools for more informed planning and improved efficiency in experimentation of site-wide changes.

Adjunct Professor 2012 - 2012
Babson College
Taught graduate course in analytics, data-mining, and visualization with a focus on business applications.

Statistical Consultant 2010 - 2012
Dyad Systems
Planned and conducted statistical analysis of clinical trial data demonstrating the efficacy of therapeutic interventions and medical devices.

Statistical Consultant 2005 - 2012
United BioSource Corporation
Served as lead statistical analyst in studies of disease course, effect of therapy, and clinical adherence. Synthesized data across multiple sources including large, multiple-hundred-gigabyte datasets.

Adjunct Professor 2008 - 2011
John Jay College, City University of New York
Developed and taught semester-length classes at the undergraduate, masters, and doctoral level. Course topics included statistics, computer science, remedial mathematics, and calculus.

Statistical Research Analyst 2004 - 2006
Human Services Research Institute
Designed an economic and outcomes-based model of mental health systems based on Markov processes. Oversaw and conducted primary statistical analyses and meta-analytic comprehensive reviews.

Data Analyst 2001 - 2004
Whitehead Institute / MIT Center for Genome Research
Mapped portions of the human genome as a tiling path of bacterial artificial chromosomes informed by disparate data sources & comparative genomics. Collaborated in publishing the Human Genome Project, with two articles in *Nature*.

Additional consulting with:
Rodman & Renshaw, The Sloan Consortium, Eduventures, Babson Survey Research Group, Boston Magazine

Education

City University of New York
New York, NY — M.A. in Mathematics Spring 2011; M.Phil. and Ph.D. expected 2014 with research in cryptography

Wheaton College
Norton, MA — Bachelor of Arts in mathematics, cum laude Winter 2002

Grants and Fellowships

Research Fellow 2008 - 2010
International Technology Alliance in Network and Information Sciences
Conducted novel cryptographic research within a consortium of universities, information industry partners, the U.S. Army Research Laboratory, and the U.K. Ministry of Defense / Government Communications Headquarters.

Graduate Teaching Fellow 2008 - 2010
Graduate Center, City University of New York
Designed and instructed undergraduate courses in quantitative fields.

Relevant Skills

Mathematics: Cryptography, Neural Networks, Information Geometry, Support Vector Machines, Stochastic Models

Molecular Biology: Genome Mapping, Comparative Biology, Regional Assembly, BLAST, Nucleotide Polymorphisms

Statistics & Data Science: Analytics, Data Visualization, Data-Mining, Hierarchical Models, Meta-Analysis, Clustering

Computing: SAS, R, Spotfire, SPSS/Modeler, PERL, PHP, Ruby, C/C++, BASH Scripting, SQL, Teradata, Hadoop/Pig

PUBLICATIONS AND PRESENTATIONS

In progress: with Allen IE, Opland DM, Seaman J. Applying meta-analytic techniques to better approximate population-level gene expression in datasets with biological replicates of multiple subjects.

In progress: with Allen IE, Leff HS. Synthesizing parameters from multiple Markov models focused on different time-frames and sub-populations into a single coherent simulation with improved error estimation.

Reynolds M, Stephen R, **Seaman C**, Rajagopalan K. Persistence and Adherence to Disease Modifying Drugs Among Patients with Multiple Sclerosis, *Current Medical Research & Opinion*, 2010 March; 26 (3): 663-674.

Reynolds M, Stephen R, **Seaman C**, Rajagopalan K. Healthcare Resource Utilization Following Switch or Discontinuation in Multiple Sclerosis Patients on Disease Modifying Drugs, *Journal of Medical Economics*, 2010 March; 13 (1): 90–98.

Seaman C, Boklan KD, Dent AW. Broadcast Encryption with Multiple Trust Centers and Dynamic Coalitions, featured presentation at LatinCRYPT 2010, also presented at Annual Conference of the International Technology Alliance 2009.

Leff HS, Chow CM, Pepin R, Conley J, Allen IE, **Seaman C**. Does One Size Fit All? What We Can & Can't Learn from Meta-Analysis of Housing Models for Persons with Mental Illness, *Psychiatric Services*, 2009 April; 60 (4): 473-82.

Allen IE, **Seaman C**. Predicting Success, *Quality Progress*, 2009 February; 42 (2): 60-63.

Nordstrom BL, **Seaman C**, Reynolds MW, Rajagopalan K. Medical Costs Associated with Treatment Change in Multiple Sclerosis, presented at International Society For Pharmacoeconomics and Outcomes Research 13th Annual International Meeting, 2008 November.

Allen IE, **Seaman C**. The Trusty Jackknife, *Quality Progress*, 2008 July; 41 (7): 56-58.

Allen IE, **Seaman C**. Match Game, *Quality Progress*, 2008 February; 41(2): 56-58.

Allen IE, **Seaman C**, Data Mining in Quality and Reliability, chapter in *Encyclopedia of Statistics in Quality and Reliability*, edited by Fabrizio Ruggeri, Frederick Faltin, and Ron Kenett, John Wiley & Sons Ltd, 2008.

Reynolds M, **Seaman C**, Rajagopalan K, Roth E. Real-World Assessment of Patient Adherence and Treatment Discontinuation Among Different Treatments for Multiple Sclerosis, presented at the 23rd Congress of the European Committee for Treatment and Research in Multiple Sclerosis, 2007 October.

Allen IE, **Seaman C**. Likert Scales and Data Analyses, *Quality Progress*, 2007 July; 40 (7): 64-65.

Ross SD, Allen IE, Henry DH, **Seaman C**, Sercus B, Goodnough LT. Clinical Benefits and Risks Associated with Epoetin and Darbepoetin in Patients with Chemotherapy-Induced Anemia: A Systematic Review of the Literature, *Journal for Supportive Oncology*, 2007 April; 5 (4,supplement 2): 20-21.

Allen IE, **Seaman C**. Superiority, Equivalence and Non-Inferiority, *Quality Progress*, 2007 February; 40 (2).

Haas T (listed within article as Allen IE, **Seaman C**). Top Schools: 2006, *Philadelphia Magazine*, 2006 September.

Ross SD, Allen IE, Henry DH, **Seaman C**, Sercus B, Goodnough LT. Clinical Benefits and Risks Associated with Epoetin and Darbepoetin in Patients with Chemotherapy-Induced Anemia: A Systematic Review of the Literature, *Clinical Therapeutics*, 2006 June; 28(6): 801-31, presented at the 18th Annual Symposium of the Multinational Association of Supportive Care in Cancer, 2006 June.

Allen IE, **Seaman C**. Different, Equivalent or Both?, *Quality Progress*, 2006 July; 39 (7).

Olkin I, Allen IE, **Seaman C**. Hierarchical Modeling Using Individual Patient Meta-Analysis, presented at the New England Statistical Symposium, 2006 April.

Taylor T, et al (including **Seaman C**). Human chromosome 11 DNA Sequence and Analysis Including Novel Gene Identification, *Nature*, 2006 March 23, 440 (7083): 497-500.

Allen IE, **Seaman C**. Data Mining for Quality, *Quality Progress*, 2006 February; 39 (2).

Ozment K (in article as Allen IE, **Seaman C**). Smart Answers (the Best Schools), *Boston Magazine*, 2005 September.

Allen IE, **Seaman C**. Cumulative Meta-Analysis, *Quality Progress*, 2005 April; 38 (4), also *Babson Free Press,* 2005 May.

International Human Genome Sequencing Consortium (full author list in supplemental material). Finishing the Euchromatic Sequence of the Human Genome, *Nature*, 2004 October 21; 431(7011): 931-45.