

Dan R. Preston

Brighton, MA

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EDUCATION

TUFTS UNIVERSITY, Medford, MA

June 2008 – Present

Masters/PhD Program. Computer Science, Machine Learning concentration.
Current GPA: 4.0.

BRANDEIS UNIVERSITY, Waltham, MA

2007

Bachelor of Science. Computer Science Major.
Summa Cum Laude. Highest Honors in Computer Science.
Dean's List all semesters. Cumulative GPA: 3.8.
Michtom Prize for Outstanding Achievement in Computer Science.

SKILLS

Strong skills in Java, C/C++, PHP, Perl, XML, HTML/CSS, JavaScript/AJAX, Ruby (on Rails), shell scripting. Extensive experience with Linux/Unix, Mac OS X and Windows systems, Apache, and MySQL. Research and prototyping experience with Matlab, Mathematica, and LaTeX. Research experience includes: Time Series analysis, classification and detection (*Time Series Center, Harvard University; Thesis Research, Brandeis University*); Machine Learning, Data Mining algorithms and theory (*Tufts University*); Image classification algorithms, taxonomic structures (*Double Picture / Photrade*).

EXPERIENCE

Research Assistant

TUFTS UNIVERSITY, Medford, MA

June 2008 – Present

Research in conjunction with Boston University geography department for classification of remote-sensing data. Current research uses a semi-supervised approach to discover the natural clustering of the data set (in addition to model selection), using prior domain knowledge as constraints. Upcoming research is a joint collaboration with the Tufts University Medical School, involving outlier detection in gene sets.

Time Series Researcher, Research Assistant

HARVARD UNIVERSITY, Cambridge, MA

November 2007 – Present

Collaborated with astronomers and computer scientists at the Initiative in Innovative Computing at Harvard University, in conjunction with the Harvard-Smithsonian Center for Astrophysics. Research is based on Time Series analysis, particularly involving discovery of events in astronomical surveys such as MACHO, TAOS and Pan-STARRS. Published paper describing an algorithm based on Scan Statistics for discovery of these events (see *Publications*). All prototyping and software engineering was done in C.

Lead Developer, Co-Founder

DOUBLE PICTURE (d.b.a. Photrade), Boston, MA

January 2006 – November 2007

Online business venture dedicated to providing photographers the ability to monetize their work in new ways, and to provide such photographers with exposure to larger audiences. Co-founded company, obtained seed capital from angel investors in 2007. All work, including two prototypes and final product, built within the LAMP framework (Linux, Apache, MySQL, PHP). Image recognition, classification and indexing algorithms designed in Java. API design and implementation. Managed and collaborated with newly hired engineers to develop full product. Handled technical write-ups and audits for administrative purposes. Managed team of four software engineers and graphic designers.

Software Engineer Intern

AUTHORIA, Waltham, MA

Summer 2006

Software Engineering firm specializing in Web-Based Human Resource communication and software. Began at the company as a Build Engineer Intern. Heavy shell and Perl scripting. Helped build redundant Subversion mirroring system to protect company's intellectual property. Promoted to Software Engineer Intern. Developed within framework of Java, Hibernate, Velocity, Tomcat/Apache, and Oracle. Significant experience with Eclipse IDE, CVS/Subversion, collaborative software (RallyDev). OO design and development. Valuable experience working with a large team of engineers.

Security Researcher, Software Engineer, Co-Founder

DIGITALLY INCLINED NETWORKS, Boston, MA / Los Altos, CA

2003 – 2006

Open Source Software, Networking and Security group. Linux/Unix system networking and administration. Apache and Database administration. Managed mail, web, and name servers for several clients. Ran security audits. Shell scripting and system-level programming (C/C++). Built control panel software for users.

PUBLICATIONS AND PRESENTATIONS

Event Discovery in Time Series. Dan Preston, Pavlos Protopapas and Carla Brodley. *Proceedings of the Ninth SIAM International Conference on Data Mining, 2009*, pp. 61-72.

Event Discovery in Astronomical Time series. Talk. *Astronomical Data Analysis Software & Systems*, 2008.

ACTIVITIES

Thesis Research, Brandeis University, Waltham, MA

September 2006 – June 2007

Technical Support, Angel Flight Northeast

2003 – 2004

INTERESTS

Reading, Guitar, Music Composition, Music Producing and Recording, Traveling, Digital Rights, Startups and New Technologies.