

Justin Donaldson

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Education

Ph.D. Informatics, Indiana University, 2011

M.S. Human-Computer Interaction, Indiana University, 2006

B.S. Computer Science, DePauw University, 2001

Work Experience

Principal Data Scientist/PMTS
Seattle, WA

Salesforce.com
2013-

Various Data Science and Engineering Responsibilities:

Partnered with the Ignite team at SFDC to provide Data Science/ML guidance on customized ML projects that were of interest to our largest customers. Produced projects and analyses that became the basis for high value service contracts.

Partnered with the Productivity Intelligence team at SFDC to kick start various Data Science/ML initiatives. Projects here include platforms that optimized our comprehensive testing frameworks, identified and assigned errors that occur in production systems, and suggested high level architectural changes at the module level for our source code.

Accomplished a complete overhaul of the search ranking pipeline at SFDC, including adapting legacy code, introducing/cleaning loglines, improving/adapting existing A/B test functionality, analyzing and identifying optimal coefficients for ranking models, as well as laying the groundwork for our next generation ranking system.

Responsible for the initial implementation of Search on the Salesforce1 platform.

President, Co-founder
Corvallis, OR

BigML, Inc.
2011-2013

Responsibilities include early business development, general administration, and development of core front end features. Implemented web based framework and novel visualizations for machine learning systems on cloud-based infrastructures.

Intern/Engineer in Applied Research
Corvallis, OR

Strands Labs, Inc.
2004-2011

Worked as chief developer of novel web related technologies related to recommender systems and rich internet applications with a focus on interactive visualizations. Managing remote interns. Co-hosting an international student summer programming project for the web language haXe <http://labs.strands.com/Summer2008HaxeProject/>.

Independent Consultant
Indianapolis, IN

Self Employed
2001-2002

Worked for H. J. Umbaugh & Associates Certified Public Accountants, and Donaldson Capital Management, LLC. Developed large (at the time) database and form applications for monitoring and comparing utility (water/power/gas) costs among counties in the Midwest region. Queries and com-

parisons were used for the purposes of establishing municipal bonds rates. Developed database and form applications for managing customer relationships.

Research Experience

Research Assistant 2002–2003
Dr. Filippo Menczer and Dr. Javed Mostafa Indiana University
Worked as a research assistant for Dr. Menczer, developing a flexible multi-agent classifier system on the IU AVIDD high performance computing cluster. This system investigated the trade offs between monolithic and agent based textual classifier performance in information retrieval systems.

Research Assistant 2003–2004
Dr. Erik Stolterman Indiana University
Worked as a research assistant for Dr. Stolterman, investigating the interaction of aesthetics with usability. Conducted extensive literature review and developed a novel technique for identifying cultural trends in color and structural preferences for web pages.

Research Intern 2005–2010
MyStrands/MusicStrands Corvallis, Oregon; Barcelona, Spain
Development of interactive visualization systems for personal recommendation retrieval, and global recommendation analysis. Time-series analysis and applications of play streams. Large scale network decomposition analysis and applications. Long term visualization and analysis of mutual fund portfolios.

Teaching Experience

Associate Instructor for Dr. Martin Siegel, HCI I&II, Indiana University, Fall 2002 and Spring 2003
Associate Instructor for Dr. Blevis, HCI Studio Class, Fall 2003

Conference Papers

Donaldson, J., and Hazlewood, W. 2008. Candidate Mapping: finding your place amongst the candidates. In *IEEE Proceedings of the 12th International Conference on Information Visualisation* (London, U.K. July 07-11, 2008). IV '08. IEEE, Los Alamitos, CA, 63-68.

Donaldson, J. J., Conover, M., Markines, B., Roinestad, H., and Menczer, F. 2008. Visualizing social links in exploratory search. In *Proceedings of the Nineteenth ACM Conference on Hypertext and Hypermedia* (Pittsburgh, PA, USA, June 19 - 21, 2008). HT '08. ACM, New York, NY, 213-218.
DOI= <http://doi.acm.org/10.1145/1379092.1379132>

Lim, Y., Stolterman, E., Jung, H., and Donaldson, J. 2007. Interaction gestalt and the design of aesthetic interactions. In *Proceedings of the 2007 Conference on Designing Pleasurable Products and Interfaces* (Helsinki, Finland, August 22 - 25, 2007). DPPI '07. ACM, New York, NY, 239-254.
DOI= <http://doi.acm.org/10.1145/1314161.1314183>

Donaldson, J., Knopke, I., and Raphael, C. 2007. Chroma Palette: chromatic maps of sound as granular synthesis interface. In *Proceedings of the 7th international Conference on New interfaces For Musical Expression* (New York, New York, June 06 - 10, 2007). NIME '07. ACM, New York, NY, 213-218.
DOI= <http://doi.acm.org/10.1145/1279740.1279782>

Baccigalupo, C., Donaldson, J., and Plaza, E. 2008. Uncovering Affinity of Artists to Multiple Genres from Social Behaviour Data. In *Proc. of 9th international Conference on Music Information Retrieval*

(Philadelphia, PA, September 14 - 18, 2008). ISMIR '08.

Other Invited Papers (Articles/Workshops/Tutorials)

Martin, F., Donaldson, J., Ashenfelder, A., Torrens, M., and Hangartner, R. The Big Promise of Recommender Systems. *AI Magazine* Vol 32, Number 3. 2012.

Donaldson, J. and Lamere, P. 2009. Music Visualization for Discovery. (Extended) Proc. of *International Society for Music Information Retrieval*. Kobe, Japan 2009. October 26-30. (ISMIR '09)

Donaldson, J.: Music recommendation mapping and interface based on structural network entropy. In: *Oria, V., Elmagarmid, A., Lochovsky, F., Saygin, Y. (eds.) Proceedings of the 23rd International Conference on Data Engineering Workshops (WPRSIUI'07)*, ICDE '07. IEEE Computer Society, Los Alamitos, CA, 811-817.

Donaldson, J. 2007. A hybrid social-acoustic recommendation system for popular music. In *Proceedings of the 2007 ACM Conference on Recommender Systems* (Minneapolis, MN, USA, October 19 - 20, 2007). RecSys '07. ACM, New York, NY, 187-190.

DOI= <http://doi.acm.org/10.1145/1297231.1297271>

Invited Student Design Competitions

Donaldson, J., Genkina, A., MacArthur, S., Ozakca, M., and Stephano, A. 2004. DOVE: digital Olympic voting environment. In *CHI '04 Extended Abstracts on Human Factors in Computing Systems* (Vienna, Austria, April 24 - 29, 2004). CHI '04. ACM, New York, NY, 1631-1635.

DOI= <http://doi.acm.org/10.1145/985921.986176>

Donaldson, J., Evnin, J., and Saxena, S. 2005. ECHOES: encouraging companionship, home organization, and entertainment in seniors. In *CHI '05 Extended Abstracts on Human Factors in Computing Systems* (Portland, OR, USA, April 02 - 07, 2005). CHI '05. ACM, New York, NY, 2084-2088.

DOI= <http://doi.acm.org/10.1145/1056808.1057104>

Posters

Donaldson, J.: ZMDS: Visualizing Structural Entropy in Queried Network Sub-graphs. In Proc. Of NetSci 2006. Available at: http://vw.indiana.edu/netsci06/conference/Donaldson_ZMDS_.pdf

Donaldson, J. 2006. Limestick: designing for performer-audience connection in laptop based computer music. In *CHI '06 Extended Abstracts on Human Factors in Computing Systems* (Montréal, Québec, Canada, April 22 - 27, 2006). CHI '06. ACM, New York, NY, 712-717.

DOI= <http://doi.acm.org/10.1145/1125451.1125595>

Book Chapters

Lim, Y., Donaldson, J., Jung, H., Kunz, B., Royer, D., Ramalingam, S., Thirumaran, S., and Stolterman, E. 2007. Emotional Experience and Interaction Design. In Beale, Peter (Ed.), *Affect and Emotion in Human-Computer Interaction*.

Patents

Donaldson, Justin. Personal Music Recommendation Mapping. WIPO No. WO/2008/051882.

Donaldson, Justin. Real-Time Visualization of User Consumption of Media Items. WIPO no. WO/2010/040082

Donaldson, Justin. Method and apparatus for Visualizing and Interacting with Decision Trees. PCT/US2012/06330T/US2012/063300

Honors and Awards

Top Conference Poster Award NetSci 2006: ZMDS: Visualizing Structural Entropy in Queried Network Sub-graphs

International Student Design Competition Finalist, (4th Place) CHI 2004: DOVE: Digital Olympic Voting Environment

MusicStrands/MyStrands/Strands Sponsored Researcher 2006-2010

DePauw Academic Merit Scholarship 1997-2001

DePauw Math and Science Scholarship 1997-2001

Travel Grants from NSF for IPAM SEWS Workshop, RECSYS '07, and IV '08