1370 University Avenue # 511
Berkeley, CA 94704

RYAN ESHLEMAN

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PROFESSIONAL INTERESTS: Machine Learning, Data Science, Data Analysis, Text Mining, Bioinformatics, Medical Informatics, Social Media Mining, Software Development.
PROJECTS WEBSITE: http://eshlefest.github.io

EMPLOYMENT

Research Staff Member, Biocomputing and Media Research Lab — Fall 2015 - Present
San Francisco State University

- Design machine learning, data mining, and algorithmic solutions to problems in bioinformatics, medical informatics and social media analysis
- Develop software that deploys these solutions for use in the research community
- Develop long term research strategies, write research articles and grant proposals
- Present results internally and at international and regional conferences
- Mentor junior lab members

Instructor, San Francisco State University — Fall 2014 – Spring 2015

- Instructor: CSc. 210, Intro to Programming: Java
- Instructor: CSc. 309, Programming for Scientists and Engineers. C, Matlab
- Teaching Assistant: CSc. 510 Analysis of Algorithms

Watson Summer intern, IBM Almaden Research Center — Summer, 2014
Watson Platform Development

- Automated deployment and scale out of two Watson cognitive computing cloud based services
- Implemented ReST interface to distributed analytics pipeline allowing for increased visibility, control, and system monitoring capabilities.

TECHNICAL EXPERIENCE - PROJECTS

Visit Notes Analysis Module for OpenMRS:

- Designed and implemented information extraction system for plain text doctor's notes in the open source medical informatics platform OpenMRS.
- Developed algorithm to extract medical entities from text and render interactive summaries.
- Developed language model refinement application to iterative improve algorithm performance with use
- Java/Spring/Tomcat, HTML5
- Source and documentation: https://wiki.openmrs.org/display/docs/Visit+Notes+Analysis+Module

Quantal Dose Response Calculator and Analysis Workbench:

- Designed and developed web based analysis platform for macro parasite video/image analysis
- Provide interface for supervised and unsupervised machine learning methods and results visualization.
- Java/Jersey/Tomcat, Matlab, HTML5.

Atmospheres – Visualizing and Analyzing Local Sentiment with Twitter:

- Designed and implemented analysis pipeline and web application to visualize sentiment levels of San Francisco neighborhoods based on machine learned sentiment models and geolocated tweets.
- Python/Flask, NLTK, HTML5.
- Source code and documentation: https://github.com/eshlefest/atmospheres

Topic Modeling for Information Retrieval:

- Designed and implemented federated search system for HTML data.
- Components include: Distributed document parsing system, multithreaded clustering and Locality Sensitive Hashing algorithms, language modeling, and resource relevance judgments.

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. Python, NLTK

PUBLICATIONS

Ryan Eshleman, Rahul Singh "Leveraging Graph Topology and Semantic Context for Pharmacovigilance in Twitter Streams" (currently under peer review at BMC Bioinformatics)

Ryan Eshleman, Rahul Singh, "Progression Reconstruction from Unsynchronized Biological Data using Cluster Spanning Trees", International Symposium on Bioinformatics Research and Applications (ISBRA), 2016 (Accepted)

Ryan Eshleman, Hui Yang, and Barry Levine, "Structuring Unstructured Clinical Narratives in OpenMRS with Medical Concept Extraction." IEEE International Conference on Bioinformatics & Biomedicine, Washington DC, 2015.

Ryan Eshleman and Hui Yang "' Hey #311, Come Clean My Street!': A Spatio-temporal Sentiment Analysis of Twitter Data and 311 Civil Complaints." Big Data and Cloud Computing (BdCloud), 2014 IEEE Fourth International Conference on. Sydney, Australia 2014.

TALKS

Ryan Eshleman, Rahul Singh, "Leveraging Graph Topology and Semantic Context for Pharmacovigilance in Twitter Streams", Midsouth Computational Biology and Bioinformatics Society Conference, 2016 (Peer reviewed abstract and presentation)

Ryan Eshleman, et al "Atmospheres: A Tool for Analyzing Local Sentiment with Twitter." Workshop on Civic Technology and Smart Cities. SFSU, 2015.

Ryan Eshleman, Hui Yang, and Barry Levine, "An Extensive Empirical Evaluation of Four Named Entity Recognition Systems Using Textual Clinical Narratives." Poster, Biomedical Computation at Stanford, 2015.

HONORS AND AWARDS

. Distinguished Graduate Achievement Award, 2016: One of two students selected from the Computer Science department to receive the award. (SFSU)
. Honorable Mention, Graduate Research Competition, 2015. (SFSU)
. Phi Beta Kappa Honor Society Initiate, 2010. (UCSB)
. Albert Camus award for academic achievement (Paris, France)

EDUCATION

San Francisco State University Fall 2013 – Summer 2015

. M.S. in Computer Science, GPA: 3.92
. Coursework: Health Informatics, Data Mining, Pattern Analysis and Machine Intelligence, Information Retrieval, Adv. Objected Oriented Design, Adv. Operating Systems, Analysis of Algorithms I & II, Theory of Computing, Computing for Life Sciences, Mobile Application Development.

University of California, Santa Barbara Fall 2006 – Spring 2010

. B.A. Cum Laude in Comparative Literature, foreign language emphasis in French, GPA: 3.63
. Dean's Honors 2008-2010

l'Université Paris-Sorbonne (Paris IV), Paris, France Fall 2008 – Spring 2009

. Completed a year long French language immersion program

REFERENCES: Dr. Barry Levine (thesis advisor), Levine12@gmail.com
Dr. Hui Yang (thesis advisor), huiyang@sfsu.edu