JERMAINE D. MARSHALL | GRADUATE RESEARCHER

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Courses & Competencies

- Applied Statistics
- Graduate Algorithms
- Data Science
- Relational Databases
- Database Concepts
- Statistical Modeling
- Data Visualization
- Excel
- Software Engineering
- Internet Applications
- Operating Systems
- Linear Algebra

Languages in order of knowledge: Python, Java, Spark, SQL, Matlab, HTML5 & CSS, JavaScript
Applications & Fameworks: Spark, Social Media Analytics, Information Processing, & Machine Learning
Github: https://github.com/jemarsha

EDUCATION

Ph.D. Computer Science, GPA: 3.67, Advisor: Dong Wang, University of Notre Dame (**Expected Dec 2018**)
B.S. Computer Science, GPA: 3.56 University of Arkansas -Little Rock, (**Received May 2015**)

RESEARCH AND PROFESSIONAL EXPERIENCE

RESEARCH EXPERIENCE:

Semantic-Aware Truth Discovery in Social Sensing, University of Notre Dame (**Present**)

- Developing a system in python for semantic analysis and analysis of heterogeneous data such as photos from social networks for Social Sensing Applications.
- Utilizing machine learning algorithms such as clustering, expectation maximization, and neural networks to develop predictive models that verify the reliability of data received from using humans as sensors.
- This can effectively increase global security and provide a framework for other companies to use to see what the media is saying about company products. I have published multiple conference papers on this topic and presented results.

PROFESSIONAL EXPERIENCE:

INTEL CORP. Data Science Intern: McAfee, Santa Clara, CA (**May – Aug. 2016**)

- Developed time series analysis using long short term memory recurrent neural networks to predict future refund rates of Mcafee product
- Developed logistic regression model and optimized it to predict likelihood of customers to request refunds on McAfee product as part of a bigger goal to increase conversion rates from trial to activation of McAfee subscriptions by 3%.
- Presented results to the team and Head of Business Intelligence at conclusion of internship.
- Queried customer refund data for McAfee product using SQL from HIVE data warehouse to use for analysis
- Also performed cluster analysis on Mobile Android SDK permissions to see which permissions are more likely to belong to particular categories of mobile apps.

UNIVERSITY OF NOTRE DAME. Teaching Assistant: Data Mining, Notre Dame, IN (**Aug. – Dec. 2015**)

- Tutored students on using the Weka Data Mining Tool and coding using python's machine learning capabilities so that they would be well versed in applying these tools to real world data and high-dimensionality data.

ADOBE SYSTEMS INC. Software Engineer Intern: Mobile App. Development, San Jose, CA (**May – Aug. 2015**)

- Developed an Android Unit Test Automation Framework for Document Cloud Mobile Apps in conjunction with the Jenkins build system and Git so that other development teams would be able to pass and incorporate unit tests more efficiently and thus effectively decreased the amount of time devoted to Unit Testing.

ACHIEVEMENTS & PROFESSIONAL ORGANIZATIONS

Google Scholar
Code2040 Fellow
NSF GRFP Fellow
Graduate Education for Minorities (GEM) Ph.D. Science Fellow
National Society of Black Engineers (NSBE)
Association for Computing Machinery (ACM)
McNair Scholar

CONFERENCE PUBLICATIONS:

- Marshall, J., Wang, D. *Mood-Sensitive Truth Discovery For Reliable Recommendation Systems in Social Sensing* (10th ed., pp.8). Boston, MA: **The 10th ACM Conference on Recommender Systems 2016.**

- Marshall, J., Wang, D. *Hardness-aware Truth Discovery in Social Sensing Applications* (12th ed., pp. 8). Washington D.C.: **The IEEE International Conference on Distributed Computing in Sensor Systems 2016.**

- Wang, D., Marshall, J., Huang, C. Theme-Relevant Truth Discovery on Twitter: An Estimation Theoretic Approach (10th ed., pp. 8). Cologne, Germany: **The International AAAI Conference on Web and Social Media 2016.**

- Marshall, J., Wang, D. *Towards Emotional-aware Truth Discovery in Social Sensing Applications* (2nd ed., pp. 8). Saint Louis, MO: **The IEEE International Conference on Smart Computing 2016.**

- Huang, Chao., Marshall J., Wang, D. (in press). *Towards Reliable Social Sensing in Cyber-Physical-Social Systems* (30th ed. pp. 8). Chicago, IL: **The IEEE International Parallel & Distributed Processing Symposium Workshop 2016**