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**EDUCATION**

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- **University of Wisconsin – Madison** Madison, WI  
*Ph.D. in Computer Sciences* *Expected 2019*
  - **Advisor:** Colin Dewey
  - **Thesis:** Computational methods for transcriptome-based cellular phenotyping
- **University of Wisconsin – Madison** Madison, WI  
*M.S. in Computer Sciences* *Dec. 2015*
- **University of Notre Dame** South Bend, IN  
*B.S. in Computer Science; Magna Cum Laude* *May 2013*

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**EXPERIENCE**

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- **University of Wisconsin - Madison** Madison, WI  
*Research Assistant under Prof. Colin Dewey* *Aug. 2014 - Present*
  - Developing novel computational and statistical approaches for extracting knowledge from large, heterogeneous repositories of gene expression data
  - Mentor undergraduate students working in the lab
- **Amazon** Seattle, WA  
*Software Development Engineering Intern* *Summer 2014*
  - Designed, implemented, and launched auto-complete search-suggestions for the Amazon Local website's search bar. Search suggestions are served as the user is typing a query
  - Designed, implemented, and launched an offline system that uses previous customer search data to pre-compute an index of search suggestions
- **University of Wisconsin - Madison** Madison, WI  
*Teaching Assistant (Lecturer)* *Aug. 2013 - May 2014*
  - Lecturer to ~30 students in CS 302 - Introduction to Programming
  - Created assignments, quizzes, and lesson plans for my class
  - Designed two programming projects that all ~700 students enrolled in CS 302 were required to complete
- **Amazon** New York, NY  
*Software Development Engineering Intern* *Summer 2013*
  - Improved Amazon Posts - a tool that allows brands to create short, social messages that appear on various feeds across Amazon websites
  - Revamped the Amazon Posts management UI to include analytics that inform brands on how successfully each post has reached customers and promoted purchases
  - Improved the customer-facing look and feel of the Amazon Posts feeds
- **Space and Naval Warfare Systems Command (SPAWAR)** San Diego, CA  
*Research Intern* *Summer 2012*
  - Developed a machine learning based solution for the task of determining political and group affiliation of anonymous internet authors
  - Built a prototype application for tagging public web content that may be of interest to intelligence analysts

## AWARDS AND FELLOWSHIPS

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- **NIH/BD2K Young Investigator Travel Scholarship**, International Conference on Intelligent Systems for Molecular Biology (ISMB), Chicago, IL, July 6-10, 2018
- **Best Plenary Talk**, National Library of Medicine Informatics Training Conference, San Diego, CA, June 6, 2017
- Awarded three year, NLM funded traineeship through the **Computation and Informatics in Biology and Medicine** training program between Feb. 2015 - Feb. 2018
- **University Housing Honored Instructor Award**. University of Wisconsin–Madison, Fall 2013
- **Tau Beta Pi** Membership. University of Notre Dame, Fall 2011
- **Upsilon Pi Epsilon** Membership. University of Notre Dame, Fall 2011

## PEER-REVIEWED PUBLICATIONS

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- **Bernstein, M.N.**, Doan, A., Dewey, C.N. (2017). MetaSRA: normalized human sample-specific metadata for the Sequence Read Archive. *Bioinformatics*, 33(18), 2914–2923.

## TALKS

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- **International Conference on Intelligent Systems for Molecular Biology (ISMB)** Chicago, IL  
*MetaSRA: normalized human sample-specific metadata for the Sequence Read Archive* July 7, 2018
- **Center for Predictive Computational Phenotyping Annual Retreat** Madison, WI  
*Cellular phenotyping with mass, heterogeneous transcriptomic data* May 31, 2018
- **National Library of Medicine Informatics Training Conference** San Diego, CA  
*MetaSRA: normalized human sample-specific metadata for the Sequence Read Archive* June 6, 2017
- **Center for Predictive Computational Phenotyping Annual Retreat** Madison, WI  
*MetaSRA: normalized human sample-specific metadata for the Sequence Read Archive* June 1, 2017

## POSTER PRESENTATIONS

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- **RNA-Seq Summit** San Francisco, CA  
*MetaSRA: normalized human sample-specific metadata for the Sequence Read Archive* April 26-27, 2017
- **National Library of Medicine Informatics Training Conference** Columbus, OH  
*Standardizing sample-specific metadata in the Sequence Read Archive* June 27-28, 2016

## SERVICE

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- **Journal referee**: Bioinformatics
- **Integrated Biological Sciences Summer Research Program** Madison, WI  
*Mentor* Summer 2015, 2016
  - Co-mentored undergraduate students' summer research projects with Prof. Colin Dewey
- **Computer Sciences Graduate Student Welcome Weekend** Madison, WI  
*Committee member, Committee chair* Spring 2014, 2015, 2016
  - Planned the department's prospective student visit weekend
  - Chaired the committee in Spring 2015
- **Scratch Computer Programming Club at Stephen's Point Elementary** Madison, WI  
*Club Leader* Spring 2015
  - Led an after school computer science club for 4th and 5th grade students

## TECHNICAL SKILLS

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- **Software Development:** Python (strong), Java (strong), C/C++ (familiar), JavaScript (familiar), HTML, CSS, SQL, MongoDB, Git, Numpy, Matplotlib, Scikit Learn
- **Computer Science & Machine Learning:** classification, probabilistic modeling, dimensionality reduction, named entity recognition, knowledge representation
- **Bioinformatics & Computational Biology:** RNA-seq, transcriptome quantification, gene expression analysis, biomedical text mining