

EDUCATION

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- **University of Wisconsin – Madison** Madison, WI  
*Ph.D. in Computer Sciences* Aug. 2019
  - **Thesis:** Computational methods for transcriptome-based cellular phenotyping
  - **Advisor:** Colin Dewey
- **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

EXPERIENCE

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- **Morgridge Institute for Research** Madison, WI  
*Postdoctoral Fellow* Sept. 2019 - Present
- **University of Wisconsin - Madison** Madison, WI  
*Research Assistant under Prof. Colin Dewey* Aug. 2014 - Aug. 2019
- **Amazon** Seattle, WA  
*Software Development Engineering Intern* Summer 2014
- **University of Wisconsin - Madison** Madison, WI  
*Teaching Assistant (Lecturer)* Aug. 2013 - May 2014
- **Amazon** New York, NY  
*Software Development Engineering Intern* Summer 2013
- **Space and Naval Warfare Systems Command (SPAWAR)** San Diego, CA  
*Research Intern* Summer 2012

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, National Library of Medicine 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

SOCIETY MEMBERSHIPS

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- **International Society for Computational Biology** 2019-present
- **Phi Kappa Phi** honor society 2019-present
- **Tau Beta Pi** engineering honor society 2011-present
- **Upsilon Pi Epsilon** computing honor society 2011-present

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.

## PREPRINTS

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- **Bernstein, M.N.** and Dewey, C.N. (2019). Hierarchical cell type classification using mass, heterogeneous RNA-seq data from human primary cells. *bioRxiv*.

## TALKS

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- International Conference on Intelligent Systems for Molecular Biology Chicago, IL, *July 2018*
- Center for Predictive Computational Phenotyping Annual Retreat Madison, WI, *May 2018*
- National Library of Medicine Informatics Training Conference San Diego, CA, *June 2017*
- Center for Predictive Computational Phenotyping Annual Retreat Madison, WI, *June 2017*

## POSTER PRESENTATIONS

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- Great Lakes Bioinformatics Conference Madison, WI, *May 2019*
- RNA-Seq Summit San Francisco, CA, *April 2017*
- National Library of Medicine Informatics Training Conference Columbus, OH, *June 2016*

## SERVICE

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- **Journal referee:** Bioinformatics
- **Integrated Biological Sciences Summer Research Program** Madison, WI  
*Mentor Summer 2016, 2017, 2019*
  - 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 School** 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