Anna **Yannakopoulos**

Data Scientist · Bioinformatician · PhD Student

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Education

Michigan State University
East Lansing, MI

PhD, Major in Computational Math, Science, and Engineering
Aug 2017 - present

- 3.7 GPA

Florida State University
Tallahassee, FL

BS, Major in Physics and Computational Science, Minor in Mathematics
Aug 2013 - May 2017

- *Magna cum laude* (3.8 GPA), Phi Beta Kappa, Dean's List 2013 - 2017

Skills

Languages Python, R, C/C++, CUDA, MATLAB, SQL, LaTeX
Software Pandas, NumPy, PyTorch, OpenMP, MPI, Elastic Stack
Platforms High-performance computing, Linux, Windows

Experience

Michigan State University
East Lansing, MI

PhD Student
Aug 2017 - present

- Designing novel methods of incorporating low-quality and unconventional data into machine learning algorithms to discover the genetic basis of human health
- Developing natural language processing pipelines to extract biological relationships from unstructured text data using word embeddings
- Managing code standards, software, and high-performance computing environments for a diverse interdisciplinary lab

Institute for Cyber-Enabled Research
East Lansing, MI

ACRES REU Student Mentor
May 2019 - Jul 2019

- Taught weekly interactive seminars on various technical and professional subjects that were given high ratings in clarity and practicality
- Provided resources, advice, and guidance to undergraduate students undergoing their first research experience
- Advocated for students to administrators to improve the REU program

University of Notre Dame
South Bend, IN

Research Assistant
May 2016 - Jul 2016

- Designed and integrated an interactive monitoring module into a distributed high-throughput high-energy physics application
- Interfaced multiple disparate programs and diverse data sources to provide a complete view of the application's behavior
- Chosen as the top student out of 20 to present at a national conference on behalf of the DISC REU program

National High Magnetic Field Laboratory
Tallahassee, FL

Research Assistant
Mar 2014 - Mar 2016

- Created applications to collect, transform, and analyze experimental condensed matter physics data
- Built simulations of the electronic structure of solids
- Wrote drivers to control precision laboratory equipment

Awards

2017 **Engineering Distinguished Fellowship,** Michigan State University — *East Lansing, MI*
2017 **Anna Runyan Award,** Florida State University — *Tallahassee, FL*
2013 **3rd Place, Moody's Mega Math Challenge,** Society for Industrial and Applied Mathematics — *New York City, NY*
2013 **National Merit Scholar Semifinalist,** National Merit Scholarship Corporation — *Tallahassee, FL*
2013 **Florida Bright Futures Scholarship,** Florida Department of Education — *Tampa, FL*

Presentations

Unbiased annotation of single-cell clusters using NLP and the UBERON–Cell Ontology

A. Yannakopoulos, S. Hickey, A. Krishnan

Intelligent Systems for Molecular Biology, 2020

Predicting ALZ-Associated Protein Biomarkers from Multiple Evidence Sources

A. Yannakopoulos, A. Bernstein, I. Vega, A. Krishnan

Michigan State University Engineering Graduate Research Symposium, 2019, East Lansing, MI

Predicting Alzheimer's Disease-Associated Protein Biomarkers from Multiple Evidence Sources

A. Yannakopoulos, A. Bernstein, I. Vega, A. Krishnan

Research in Computational Molecular Biology, 2019, Washington, DC

Predicting Alzheimer's Disease-Associated Protein Biomarkers from Multiple Evidence Sources

A. Yannakopoulos, A. Bernstein, I. Vega, A. Krishnan

Women in Data Science, 2019, East Lansing, MI

Disease-Gene Prediction Using Multiple Sources of Evidence

A. Yannakopoulos, A. Bernstein, A. Krishnan

Intelligent Systems for Molecular Biology, 2018, Chicago, IL

Weak Semi-Supervised Machine Learning on Genomics Data

A. Yannakopoulos, A. Bernstein, A. Krishnan

Michigan State University Engineering Graduate Research Symposium, 2018, East Lansing, MI

Visualizing and Troubleshooting Massive Science Applications with ELK

A. Yannakopoulos, K. Lannon

Research Experiences for Undergraduates Symposium, 2016, Arlington, VA

Publications

Supervised learning is an accurate method for network-based gene classification

R. Liu, C. A. Mancuso, A. Yannakopoulos, K. A. Johnson, A. Krishnan

Bioinformatics 36.11 (June 2020) pp. 3457–3465

Opportunistic Computing with Lobster: Lessons Learned from Scaling up to 25k Non-Dedicated Cores

M. Wolf, A. Woodard, W. Li, K. H. Anampa, A. Yannakopoulos, B. Tovar, P. Donnelly, P. Brenner, K. Lannon, M. Hildreth, D. Thain

Journal of Physics: Conference Series 898 (Oct. 2017) p. 052036

High magnetic field calibration using de Haas-van Alphen oscillations in polycrystalline copper

W. A. Coniglio, A. F. Williams, A. Yannakopoulos, A. Grockowiak, S. Tozer

(2016) p. V46.007