



# Ian K. Eaves

DATA SCIENTIST · MACHINE LEARNING ENGINEER

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*"Be the change that you want to see in the world."*

## Skills

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<b>Languages</b>	Python, R, Julia, Matlab, SQL, Scala, LaTeX
<b>DevOps</b>	AWS, Docker, Kubernetes, Ansible, Vagrant, Jenkins, Argo, Airflow
<b>Frameworks</b>	Scikit Learn, Tensorflow, Keras, Pandas, Dask, SpaCy, Tidyverse, Spark
<b>Back-end</b>	PostgreSQL, MongoDB, Django, Flask, REST API,

## Experience

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### Centene

St. Louis, MO

LEAD DATA SCIENTIST

Jun. 2019 - PRESENT

- Data Science project lead over the NextGen and population health data science applications.
- Lead a mixed team of seven data scientists and data engineers responsible for developing and propagating new technologies and capabilities within the company.
- Responsible for project planning and coordination with diverse stakeholders across the organization.
- Project architect for internal machine learning deployment and maintenance framework.
- Pioneered the notion of a "Full Stack" data science team within Centene that owned the full application delivery lifecycle from ideation to deployment.
- Technical lead and mentorship for junior data scientists and engineers.

### CiBO Technologies

St. Louis, MO

LEAD DATA SCIENTIST

May 2018 - May 2019

- Lead a team of data scientists developing smart tooling around data validation and ingestion of incoming messy data.
- Developed and implemented fluid flow models of rainfall distribution across varied geographies.
- Developed and implemented custom software to provide sophisticated light scattering corrections to leaf area index calculations.
- Worked on unsupervised clustering with metric learning capabilities to drive field level environmental classification.

### Monsanto

St. Louis, MO

DATA SCIENTIST

Feb. 2017 - May 2018

- Built and deployed customer demand and behavior forecasting models via GLM and tree based approaches.
- Developed generalized customer segmentation models using K-means clustering with side information.
- Oversaw development and deployment of key customer analytics business metrics driving company wide sales strategies.

### Better Weekdays

St. Louis, MO

SENIOR DATA SCIENTIST

May 2016 - Feb. 2017

- Lead a mixed team of data scientists and data engineers to develop crucial early stage company analytics capabilities.
- Built out early stage BI and analytics capabilities in Metabase.
- Lead the implementation of companies first data warehouse leveraging RabbitMQ, Django, and a custom built stream processing library.
- Deployed customized Lucene based recommendation systems to support core job recommendation functionality.
- Deployed Bayesian Multi-Armed Bandit recommender systems to provide job recommendation capabilities tailored to user preferences.

### Bellhops

Chattanooga, TN

LEAD DATA SCIENTIST

Dec. 2014 - May. 2016

- Lead a mixed team of data scientists and data engineers to develop crucial early stage company analytics capabilities.
- Responsible for analytical work leading to successful close of \$13.5 million series B funding round.
- Built out early stage BI and analytics capabilities in Chartio.
- Lead the implementation of companies first data warehouse leveraging AWS, Airflow, and SQLAlchemy.
- Developed and deployed demand forecasting models across all company market segments.
- Oversaw development of early stage machine learning capabilities leveraging NLP, alongside other traditional ML components.

## Drexel University

Philadelphia, PA

DOCTORAL CANDIDATE (ABD)

Sep. 2011 - Dev. 2014

- Developed computational finite element techniques to model Schrodingers Equation on arbitrary two dimensional geometries with special interest in the geometric pseudo potential on bound particles.
- Developed performant finite element system implemented (Matlab) with GPU parallelization in CUDA.
- Molecular dynamic & conformational analysis of AB-42 protein folding and it's role in Alzheimer's formation.
- Teaching undergraduate physics for engineers.

## Helmholtz Zentrum Berlin

Berlin, Germany

RESEARCH ASSISTANT

Jun. 2012 - Dev. 2012

- Designed & instrumented custom hall sensor array for field characterization in ultra-high magnetic field, cryogenic environments.
- Wrote custom instrumentation software (Borland Delphi).
- Experimental apparatus design in 3D CAD (Solidworks).

## Education

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### Drexel University

Philadelphia, PA

M.S. IN PHYSICS

Sep. 2011 - Dec. 2014

- Computational Quantum Mechanics

### Baylor University

Waco, TX

B.S. IN PHYSICS, MINOR IN MATHEMATICS

Sep. 2007 - May. 2011

## Open Source Projects

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### Visions

AN OPEN SOURCE LIBRARY FOR SEMANTIC DATA.

### Compressio

LOSSLESS IN-MEMORY COMPRESSION OF PANDAS DATAFRAMES AND SERIES

## Publications

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### JOURNAL ARTICLES

Visions: An Open-Source Library for Semantic Data

Ian Eaves, Simon Brugman

*Journal of Open Source Software* 5.48 (2020) p. 2145. The Open Journal, 2020

Time-dependent spatial intensity profiles of near-infrared idler pulses from nanosecond optical parametric oscillators

L. J. Olafsen, J. S. Olafsen, I. K. Eaves

*Applied Physics B* 124.6 (May 2018) p. 110. 2018

Synchronized Mid-Infrared Beam Characterization of Narrow Gap Semiconductors

L. J. Olafsen, I. K. Eaves, J. S. Olafsen

*AIP Conference Proceedings* 1416.1 (2011) pp. 88–90. 2011