Ian K. Eaves

Data Scientist · Machine Learning Engineer

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

Skills

Languages	Python, R, SQL, Julia, Matlab, Scala
DevOps	AWS, Kubernetes, Docker, Terraform, Ansible, Jenkins, Argo, Airflow
Frameworks	Scikit Learn, Tensorflow, Pandas, Dask, SpaCy, Tidyverse, PySpark
Back-end	PostgreSQL, MongoDB, Django, REST API

Experience

Grai
Madison, WI

Founder — *July 2021 to present*

- Grai is a YCombinator backed open source platform helping companies track, build, and develop data pipelines.
- Developed and implemented a novel data lineage tracking system that allows for the tracking of data transformations across multiple systems.
- Lead an international team of developers and open source contributors to develop and maintain the Grai platform whose users included Roblox, Remax, and Axios.
- Responsibilities covered every aspect of early stage company development including fundraising, sales, marketing, and product development.

Centene
St. Louis, MO

Lead Machine Learning Engineer — *Jun. 2019 - July 2021*

- 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 propogating 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 calcuations.
- 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 Schroedingers 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

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

Grai

Open source data lineage and testing platform.

Visions

An open source library for semantic data.

Compressio

Lossless in-memory compression of pandas DataFrames and Series

Pandas Profiling

Automated exploratory data analytics

Publications

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