

# Zachary Blackwood

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Machine Learning Engineer and Python Developer

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## Experience

### DTN, West Lafayette, IN Machine Learning Engineer, April 2018-Present

- Creating and maintaining scalable computing and data storage/access for data science team with AWS EC2, S3, EFS, Batch & Lambda
- Deploying and maintaining infrastructure for the data science team on AWS, including scalable computing, and data access/storage
- Training developers in Python development and best practices through code feedback, mentorship conversations and python training seminars
- Building and maintaining a distributed ML training pipeline for multiple production models that provide **electric utility outage prediction**
- Creating and maintaining a data catalog tool which enables Data Scientists across the company to create new and access new data sets for modeling and analysis

### Spensa, West Lafayette, IN Full Stack Web Developer, July 2015-April 2018

- Developing end-to-end features to conform to both detailed and limited specifications derived through conversations with product management
- Managing and scaling web servers and PostgreSQL servers with a growing customer base and seasonal demand spikes
- Integrating with several third-party APIs to allow users to asynchronously move terabytes of data to and from these other services
- Technical management for multi-million dollar long-term contract, including prioritizing tasks, training and assistance for a team of developers and facilitating customer and product management relationships
- Monitoring and maintaining system to address outages and various other customer issues

### Lewis Cass, Walton, IN High School Teacher, September 2010-July 2015

- Teaching courses including Physics, Computer Science & Principles of Engineering
- Introducing multiple new courses to the school, including beta-teaching **PLTW** Computer Science
- Researching, developing, delivering and revising effective lessons based on student success and student and mentor feedback
- Creating and mentoring the Iron Kings, a **FIRST Robotics** team, who were able to advance to the World Championship in our rookie season
- Mentoring the team members in fundraising, software development, electrical wiring, etc. in the process of creating our robot

## Technical Experience

**Open Source**      Contributed to python libraries, including **intake** • **intake-geopandas** • **apache arrow**

Co-developer and maintainer of a **custom plugin** for Intake which allows for the automatic population of a data catalog with data files matching a certain pattern

**Program-  
ming Lan-  
guages**      **high proficiency:** Python

**medium proficiency:** JavaScript

**Technical  
Tools**

**ci/cd tools:** Bitbucket pipelines, GitLab, Bamboo

**data science packages:** Pandas, Intake, Scikit-learn, Lightgbm

**cloud architecture:** Amazon Web Services (Batch, Fargate, Lambda, EC2, S3, RDS, CloudFormation, CloudWatch, IAM)

**web development:** Django, backbone.js, Postgresql, Postgis, Django Rest Framework, HTML, CSS

**Side projects**

Web development, design & hosting for various non-profit sites such as:

**Gentle Reformation • Women's Retreat • How Shall We Then Vote**

**Education**

**2009-2011**      **M.S.Ed, Mathematics and Physics Education;** Purdue University (West Lafayette, IN)

**2005-2009**      **B.S., Math & Physics;** Purdue University (West Lafayette, IN)  
*Minor: Computer Science*

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