

RYAN ZERNACH

MACHINE LEARNING ENGINEER

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TECH STACK — Quickly Learns New Tools & Techniques

- Scikit-Learn / **Machine Learning** Engineering
- **Natural Language Processing** / Spacy
- **Visualizations** / Plotly / Matplotlib
- **AWS Certified** Cloud Practitioner
- **Python** Programming Language
- AWS Elastic Beanstalk / Heroku
- Pipenv / Virtual Environments
- **Tensorflow Developer** / Keras
- **SQL** / PostgreSQL / NoSQL
- Amazon RDS / TablePlus
- Command Line Terminal
- Docker Containerization
- **DataRobot** AutoML
- **Github** Workflow
- Flask / FastAPI
- Pandas & Numpy
- Big Data Analytics
- Tableau / Power BI
- JavaScript / HTML / CSS
- Advanced Microsoft365
- Dash Core Components
- Django Web Development
- Wordpress Web Development
- Extract Transform Load (ETL)
- Web Scraping / BeautifulSoup
- Data Lakes / Data Warehouses
- Figma Designing & Prototyping
- Software Development Life Cycle (SDLC)

PORTFOLIO PROJECTS — Links to Additional Details in Project Titles

Better Reads — *A Platform for Readers to Track, Share, and Discover New Books*

- Used Agile & Scrum methodologies to iteratively deploy Natural Language Processing (NLP) models
- Practiced CI/CD via blue/green RESTful Flask microservices on AWS EB to facilitate JSON post requests
- Launched and managed a PostgreSQL instance on AWS RDS to store millions of GoogleBooks data

Flight Prices — *Airline Pricing Analysis and Interactive Pricing User-Interface*

- Built front-end user interface with Flask for user to interact w/ a predictive machine learning model
- Tediously gathered 27M rows of data, wrangled/cleaned to 9M, uploaded data to Kaggle
- As a data analyst, I generated statistical analyses, distribution charts, and business intelligence insights

Brain Power — *Using Machine Learning and an EEG Device to Control Technology*

- Built an application for the user to control light switches & thermostats with their brain
- Collected data from an EEG device and used Scikit-Learn to train a predictive model
- Deployed back-end Python get request API w/ Flask: communicate w/ EEG device, detect brain patterns

Spotify Music — *Recommends New Music Based on Your Favorite Songs*

- Connected with Spotify's API to harvest data (and metadata) about the songs in their database
- Built back-end Python API's (get and post requests) to return predicted songs data to front-end

Global Glaciers — *Geographic Visualizations of the Locations of Earth's Glaciers*

- Data exploration, story-telling with data, and unique data visualizations
- Combined data science with visual communication, moving GIF files, and graphic design

EDUCATION

Data Science Software Engineering, August 2019 – August 2020

Lambda School, Remote, San Francisco, CA

- Data Engineering — Completed a deep dive into Data Engineering, working with databases, back-end API's, big data, productization, and continuous integration & deployment.
- Software Engineering — Served as a data scientist on remote development teams via Slack, Zoom, Notion, & Trello alongside UX designers, web-devs, and iOS developers to bring projects to fruition.
- Machine Learning — Gained hands-on experience by engaging with machine learning and being able to understand unsupervised learning, natural language processing, & neural networks.
- Statistical Analysis — Developed a solid foundation of analytical and predictive statistics, including linear algebra, linear regression, hypothesis testing, and storytelling with data.
- Computer Science — Learned first-hand about how various data structures (hash tables, graphs, BST's, etc.) can optimize runtime complexity, classic algorithmic paradigms, and computer architecture.

Computer Science & Mathematics, August 2011 – December 2012

Georgia Southern University, Statesboro, GA

- Calculus I, Calculus II, Calculus III, Statistics, Data Structures, Programming Principles I, Programming Principles II, Discrete Mathematics, Ethics of Computers in Society

CERTIFICATIONS

- **DataRobot 10x Data Science AutoML**, September 2020
- **TensorFlow Developer**, July 2020
- **AWS Cloud Practitioner**, June 2020

EXPERIENCE

Vanderbilt University, *Teaching Assistant: Data Visualizations*

Part-Time, Remote, September 2020 – Present

Trilogy Education, *Data Science Tutor & Grader*

Part-Time, Remote, August 2020 – Present

instaSod.com, **CustomizedChristmasLights.com**, *Small Business Owner (Self Employed)*

Full-Time, October 2015 – January 2019, 3 yrs 4 mos

- Data Management — automation, invoicing, client management, Google Analytics
- Professional Sales — Generated \$450k+ gross sales over the course of three years
- Designer — websites, systems, processes, graphics, digital landscapes, sales proposals
- Lessons Learned — the experience of managing my own businesses has shaped my mindset:
 - o Customer/User/Client Centered Mindset
 - o Ability to Ask the Right Questions
 - o Desire to Never Stop Learning
 - o Intuition to Set Goals/Plans
 - o Clarity of Communication
 - o Team-Building Aptitude
 - o Humility to Ask for Help
 - o Results-Driven Attitude
 - o Disciplined & Focused
 - o Critical Thinking Skills
 - o Capacity to Research
 - o Task Management

