Zachary A. Churchill

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SUMMARY

Resourceful Data Scientist with 7 years of hands-on experience spanning from initial analytics to advanced Machine Learning operations (MLOps). Proficient in Python, R, and SQL, I've driven business insights and engineered custom pipelines for deploying complex data models. Eager to expand my software engineering capabilities, I am keen to evolve into a full-fledged Machine Learning Engineer.

EDUCATION

Bachelor of Science in Mathematical Statistics, Minor in Economics — Ohio University, Athens OH

Overall G.P.A: 3.82 / 4.00 *Magna Cum Laude*

Major G.P.A: 3.98 / 4.00 *Diploma Conferred on Dec 10th, 2016

PROFESSIONAL EXPERIENCE

American Electric Power Columbus OH Oct 2022 - Current

Principal Data Analyst (Tech Business Analyst Prin) Oct 2022 - Current

Technology Used: Python, R, SQL, PowerBI, git

- Lead top-of-the-funnel analytics, bridging gaps through cross-team collaboration and swift data insights. Piloted data-driven initiatives like preventive maintenance analysis to optimize break-fix costs and offer timely support for the Operations and Performance Transformation team on enterprise projects.
- Champion AEP's understanding and application of Generative AI (GenAI). Delivered a comprehensive presentation on its potential uses, nuances like prompt engineering, and the imperative of data privacy.
- Offer expertise in MLOps from a software engineering perspective through code reviews, best practice recommendations, and solution brainstorming alongside solution engineers and data scientists.
- TODO around GenAI platform and specific MLOps example around Vision ML pipelines in AWS SageMaker for wind turbine blade defect detection (utilized Ground Truth, fine-tuned AWS-provided segmentation models and created pipelines to fine-tine custom Pytorch scripts).

State of Ohio - MHAS Columbus OH Mar 2022 - Sept 2022

Data Scientist (Software Development Specialist 4) Mar 2022 - Sept 2022

Technology Used: Python, SQL, PowerBI

- Spearheaded an in-depth analysis of the Grants and Funding Management System. This initiative led to the development of a preliminary PowerBI dashboard, offering crucial insights into grant allocations. This tool was designed to transparently showcase the value of grant distributions to Ohio residents.

Root Insurance Columbus OH Feb 2019 - Feb 2022

Data Analyst II - LTV Analytics Oct 2021 - Feb 2022

Technology Used: SQL, R, Tableau, Mode Analytics, git

- Deliver pivotal analytics support for external business inquiries centered on customer lifetime value (LTV) metrics. Actively design a series of executive dashboards to assess the accuracy and consistency of the model-generated LTV metrics.

Software Engineer I, II - Data Science Engineering Mar 2020 - Sept 2021

Technology Used: Python, AWS, Docker, git, BuildKite, Terraform

- Sustained and enhanced the customer lifetime value prediction process by crafting internal packages and templates, enabling data scientists to streamline machine learning model deployments within AWS SageMaker.
- Guided the development of SageMaker Endpoint APIs and serverless infrastructure, strategically transitioning the user telematics score computations away from a Ruby on Rails application.

Senior Product Analyst - Mobile App Conversion Feb 2019 - Feb 2020

Technology Used: R, SQL, Python, AWS, Docker, git, Tableau

- Established the foundational daily customer lifetime value prediction process leveraging AWS SageMaker, Lambda, and an internal data extraction tool. Initially designed for the growth marketing team, this tool became integral to the company's overarching decision-making framework.
- Directed the analysis for pivotal A/B tests within the mobile app experience and pioneered the standardization of conversion A/B test analyses. Crafted an R package to facilitate a Bayesian analysis, streamlining the generation of consistent report outcomes for analysts.

American Electric Power Columbus OH Jan 2017 - Feb 2019

CHARGE Solutions Consultant Nov 2018 - Feb 2019

Technology Used: Java, JavaScript, HTML, CSS, SmartSheet

- Collaborated with multiple business units on targeted projects to enhance workflow efficiency using SmartSheet. Simultaneously underwent training in web and mobile app development technologies.

Associated Data Scientist Jan 2017 - Oct 2018

Technology Used: Python, R, Oracle, Linux, Docker, git

- Designed and implemented a daily statistical process for quality control, automating the prediction and cataloging of potential errors in transmission data for over 600 commercial customers. Complemented this with an Oracle APEX dashboard, streamlining the team's workflow and enabling efficient note-taking on predictions.
- Engineered a comprehensive data analysis tool alongside a discrete-event simulation program, offering insights into the annualized cost implications of varied predictive maintenance inspection strategies at the Amos power plant.