

LUKE LAVIN

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EXPERIENCE

84.51° - Engineer

June 2021 - Present

Chicago, IL

- Build out ad targeting capabilities for Kroger's industry leading retail media solution, Kroger Precision Marketing
- Deploy and automate ML model behind a FastAPI service for recommending similar product groups in on-site ads, freeing account managers from doing the task manually and improving speed and consistency of recommendations
- Develop ETL pipelines for the Audience Data Asset (ADA) with Apache Spark (PySpark), Azure Databricks, and Azure Data Factory, while maintaining a Python library for user consumption across cloud and on-prem environments
- Support and improve existing on-prem Hadoop processes that use automation solutions like Airflow and Automagic
- Found and fixed long-unnoticed bug that jeopardized legality and profitability of all Kroger direct mail campaigns

84.51° - Software Engineering Intern

May 2020 - July 2020

Chicago, IL

- Built cloud-native service allowing dynamic self-registration for Azure Service Bus consumers, freeing developers from manually updating hardcoded monitor configuration or coordinating across teams
- Contributed to key company-wide DevOps resources, such as Terraform modules and shared Azure Pipelines templates
- Worked with other interns to create a Python Flask service that identified old and unused projects wasting resources

Ford Motor Company - Student Data Science Consultant

September 2019 - May 2020

West Lafayette, IN

- Partnered with Ford Motor Company and other students through Purdue's Data Mine learning community to create a system that uses natural language processing to answer drivers' questions about their car
- Led creation of information retrieval system to accurately filter data to be used by intensive question answering model
- Reduced load on transformer based QA model by 65% with minimal loss in accuracy

Purdue Computer Science - Teaching Assistant

January 2019 - May 2020

West Lafayette, IN

- Provide guidance and insight to students in lab sections, holding weekly office hours, and proctoring exams
- Explain key Object Oriented Programming and Computer Architecture concepts to both CS and out-of-major students of varying levels of experience

EDUCATION

Purdue University - West Lafayette, IN

August 2018 - May 2021

- Bachelor of Science in Computer Science - Concentration in Machine Intelligence

GPA: 3.9/4.0

Honors/Awards:

- National Merit Scholarship, Computer Science Corporate Partners Scholarship, Deans List

PROJECTS

Cluebase

cluebase.lukelav.in/

- Designed and developed a RESTful API for over 5,000 episodes and 350,000 clues from the TV game show *Jeopardy!*
- Scraped, parsed, and cleaned data from an online archive using Python before inserting it a PostgreSQL database
- Deployed the Python Flask based API to an AWS EC2 instance using Docker Compose and Docker Machine

Conglomerate - CS 307

- Developed a cross-platform app for collaborative work with messaging, document sharing, and calendar integration as a semester-long group project for a Software Engineering course
- Architected system involving Flutter client, Java Spring Boot server, MySQL database, and Amazon S3 cloud storage
- Led back-end development, initializing databases, setting up testing, and configuring CI/CD on remote hosting

SKILLS

Languages & Frameworks: Python (Spark, FastAPI, Flask), Java (Spring), SQL

General Tooling and Concepts: Git, Docker, CI/CD (Jenkins, TeamCity, Artifactory), Terraform, Cloud Computing, Event Driven Architecture, Natural Language Processing, Information Retrieval, Distributed Processing