

# LUKE LAVIN

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## EXPERIENCE

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84.51°

Chicago, IL

Senior Software Engineer

November 2023 - Present

- Build out targeting capabilities for Kroger's industry leading retail media solution, Kroger Precision Marketing
- Set team standards and develop frameworks for Python service development among mostly Java-based team
- Create service utilizing Snowflake to produce targeted-audience size estimations with 540x less latency, keeping clients engaged in campaign sale process

Software Engineer

June 2021 - November 2023

- Led creation of ML-powered FastAPI Python service recommending similar product groups, used by 90% of on-site ad campaigns, which account for \$110 million of KPM's revenue
- Developed batch data pipelines with PySpark, using Azure Data Factory and Airflow automation
- Owned the Audience Data Asset, an over 50-billion-record collection of ad targeting history used for measurement and refining future recommendations
- Fixed long-unnoticed bug that jeopardized legality and profitability of all Kroger direct mail campaigns

Software Engineering Intern

May 2020 - July 2020

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

**Ford Motor Company**

West Lafayette, IN

Student Data Science Consultant

September 2019 - May 2020

- 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 NLP model
- Reduced load on transformer-based QA model by 65% with minimal loss in accuracy

## EDUCATION

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**Purdue University**

West Lafayette, IN

Bachelor of Science in Computer Science

August 2018 - May 2021

- GPA: 3.9 / 4.0
- National Merit Scholarship, Computer Science Corporate Partners Scholarship, Deans List

## PROJECTS

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**Cluebase**

<http://cluebase.lukelav.in>

- Designed REST API for over 5,000 episodes and 350,000 clues from the TV game show *Jeopardy!*
- Created automated scraping and ML batch inference workflows using Prefect and AWS ECS workers
- Iterated on project across several years based on user feedback

## SKILLS

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

**Tooling, Platforms, and Concepts:** Git, Docker, CI/CD (Jenkins, TeamCity, Artifactory), Terraform, Cloud Computing (Azure, AWS), Databricks, Snowflake, Prefect, Airflow, Event Driven Architecture, Natural Language Processing (LLMs/RAG), Information Retrieval, Distributed Computing