LUKE LAVIN

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EXPERIENCE

84.51°   Chicago, IL
Lead Software Engineer   March 2025 - Present
- Build ad targeting capabilities for Kroger's industry leading retail media solution, Kroger Precision Marketing
- Act as a technical lead and subject matter expert within team of 18 full time engineers and contractors
- Empower data science team to productionalize research science, developing MLOps and inference patterns
- Prototype embedding model based audiences, speeding up targeting 600x with ML-backed recommendations

Senior Software Engineer   November 2023 - March 2025
- Created web service utilizing Snowflake to produce targeted-audience size estimations with 540x less latency
- Set event-driven standards for Python data pipeline development to reduce on-call incidents by 50%
- Mentored new-grad and intern, resulting in a successful internship with the extension of a return offer

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 data pipelines with PySpark and Databricks, using Azure Data Factory and Airflow automation
- Owned the Audience Data Asset, a TB-scale collection of ad targeting history for performance measurement

Software Engineering Intern   May 2020 - July 2020
- Independently built cloud-native asynchronous web service forwarding Azure Service Bus message queues
- Contributed to key company-wide DevOps/SRE resources, such as Terraform modules and CI/CD templates
- Collaborated with other interns to create a Python Flask service identifying unused projects wasting 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

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

PROJECTS

Cluebase   http://cluebase.lukelav.in
- Designed REST API for over 5,000 episodes and 400,000 clues from the TV game show *Jeopardy!*
- Created automated scraping and ML batch inference workflows using Prefect and AWS ECS workers
- Independently collected user feedback and implemented priority requests and bugfixes

SKILLS

Languages & Frameworks: Python (FastAPI, Flask, Spark, Polars), Java (Spring), SQL (Postgres, Oracle)
Tooling, Platforms, and Concepts: Git, Docker, CI/CD (GitHub Actions, Jenkins, TeamCity, Artifactory), Terraform, Cloud Computing (Azure, AWS), Databricks, Snowflake, Prefect, Airflow, DataRobot, MLFlow, Event Driven Architecture, Natural Language Processing (LLMs/RAG), Information Retrieval, Distributed Computing