

Eric Varghese, Internship

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PROFILE

Data Science student at the University of Illinois at Chicago and research assistant experienced in building end-to-end ML pipelines and integrating predictive models with geospatial/CAD tools to support disaster-response decision-making. Proficient in Python (NumPy, Pandas), R, data preprocessing, model evaluation, and geospatial analytics; demonstrated ability to improve model performance and operationalize predictions for emergency resource allocation. Seeking a data science internship to apply ML engineering and geospatial analytics to impact-driven projects.

EMPLOYMENT HISTORY

Jan 2026 — Present	Research assistant, University of Illinois at Chicago	Chicago
	<ul style="list-style-type: none">Built ML pipeline components to support disaster response decision systems, including data preprocessing and model evaluation.Integrated predictive outputs with geospatial/CAD-based tools to assist emergency resource allocation.Analyzed model performance to improve accuracy and response efficiency.	
Aug 2024 — Present	Desk worker, Uic campus housing	Chicago

EDUCATION

Aug 2023 — Present	Data science , University of Illinois at Chicago	Chicago
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SKILLS

Numpy	Scikit learn
Pandas	Matplotlib
R	Seaborn
Osm	Data modeling
Sas	Machine learning

PROJECTS

Sept 2025 — Present	OpenEVmap
	<ul style="list-style-type: none">Developing an open, manufacturer-agnostic EV route planner to support vehicles without proprietary charging/navigation systems.Integrating public charging datasets and mapping APIs to optimize routes based on battery range, charger availability, speed, and cost.Implementing energy-aware routing and building a dashboard to visualize range predictions, charging stops, and trip efficiency.
Sept 2025 — Dec 2025	Loan default prediction
	<ul style="list-style-type: none">Built a Logistic Regression model to predict loan default probability using 100K+ real-world financial records.Engineered features with one-hot encoding and aligned train/test datasets for reliable evaluation (AUC).

- Developed a full ML pipeline in Python, generating submission-ready probability predictions.

Sept 2025 — Dec 2025

Grocery Store Database Design Project

- Designed and implemented a normalized relational database for grocery store operations using an EER model and SQL schema.
- Defined primary/foreign keys and built structured tables to ensure data integrity and scalability.
- Wrote SQL queries for business insights, including vendor analysis and sales reporting.

Feb 2026 — Feb 2026

Predictive Demand Forecasting & Resource Allocation Analytics

- Built time-series forecasting models (ARIMA, regression) on 150K+ records to predict demand and workload spikes.
- Developed optimization models to allocate limited resources under budget and capacity constraints.
- Created automated ETL pipelines and dashboards to improve reporting efficiency and KPI tracking.

Avain flu bot

- Developed an ML-based web app that predicts avian flu risk using environmental and outbreak data.
- Integrated geolocation APIs and built a decision tree classifier for risk categorization (High/Low).
- Designed a full-stack pipeline (React, Django, APIs) to deliver real-time risk insights to users
- Web app boasts sparkhacks 2025 John deer track 1st place.

CERTIFICATION AND AWARDS

Sept 2025	Gen Ai Basics	Duke university
Sept 2025	Intro to career skills in data analytics	LinkedIn learning
Aug 2025	Software engineering job simulation	Goldman sachs via forage
Aug 2026	Cloud computing job simulation	Verizon via forage
Jun 2025	Cybersecurity job simulation	Mastercard via forage
	Ai materials	Korea advanced Institute for science and technology