

Richard Raithel

AI Engineer

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EXPERIENCE

Senior Data Science Engineer

Fuchs Lubricants - Fairhaven, MA

JANUARY 2021 - PRESENT

- **Developed AI-driven data retrieval systems** using Retrieval-Augmented Generation (RAG) and Large Language Models (LLMs), significantly reducing data access times for business users.
- **Architected and deployed full-stack solutions** with Django, Azure, and CosmosDB to streamline data workflows and improve reporting capabilities.
- **Built dynamic dashboards** with PowerBI and Plotly Dash, enabling actionable insights for non-technical users.
- **Designed scalable data pipelines** using Python, SQL, and cloud-native tools to support real-time analytics and machine learning workflows.

Application & Test Design Engineer

Nye Lubricants - Fairhaven, MA

MAY 2018 - JANUARY 2021

- **Enhanced laboratory data workflows** by automating processes with Python and SQL, improving efficiency and reducing manual intervention.
- **Developed software** for custom test machinery, increasing operational accuracy and minimizing downtime.
- **Engineered data pipelines** to process unstructured data, enabling advanced analysis and actionable insights.

PROJECTS

AI-Driven Data Retrieval System

- **Designed and deployed a Generative AI-powered system** to streamline data retrieval and enhance accessibility for complex datasets.
- **Integrated APIs** from platforms like Azure and OpenAI to ensure seamless functionality and real-time processing.
- **Conducted model evaluation and optimization** to improve accuracy and scalability.

Enterprise Data Management Platform

- **Built a modular data management platform** using Azure, Django, and CosmosDB, enabling scalable and efficient data handling for R&D operations.
- **Implemented CI/CD pipelines** to automate deployment and ensure robust data workflows.
- **Enhanced data visualization capabilities**, empowering stakeholders to make informed decisions with real-time insights.

SKILLS

Programming & Frameworks

Python, Django, PyTorch, Pandas, Numpy

AI/ML Expertise

Generative AI, NLP, RAG, Computer Vision

Data Engineering

SQL (MySQL, PostgreSQL), NoSQL (MongoDB, CosmosDB, VectorDBs), Cloud-native pipelines

Cloud Platforms

Microsoft Azure

Visualizations

Plotly Dash, PowerBI

DevOps

CI/CD, JIRA, Git

LINKS

LinkedIn

linkedin.com/in/richard-raithel

Portfolio

richard-raithel.github.io

Personal Project

personifAI.net

GitHub

github.com/richard-raithel

EDUCATION

UMass Dartmouth

M.S. in Data Science

JANUARY 2019 - DECEMBER 2020

UMass Dartmouth

B.S. in Mechanical Engineering

SEPTEMBER 2015 - MAY 2018