

EKAM GHOTRA

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Experience

Fall Machine Learning Engineer Intern

Sep 2024 - Present

Equii Foods

Remote

- Fine tuning **Random Forest Classifiers** and **Regression** models to identify outlier proteins in prototype recipes of future food products using **Python's SciKit-Learn, TensorFlow, and Keras**, achieving an **85+%** accuracy rate

Data Engineering Intern

Jun 2024 – Aug 2024

Comcast Corporation - Engineering Operations - Advanced Engineering

Livermore, CA

- Specialized in deriving actionable insights from data representing efficiency & reliability metrics of field-active tech
- Utilized **Microsoft & Oracle SQL** servers in creating a seamless data warehouse integration framework, accessed through **DBeaver** for streamlined data management
- Engineered scalable **ETL** pipelines with **Python, SQL**, and **Apache Spark**, contributing to **20%** improvement in data processing and subsequent modeling and Tableau dashboard construction time
- Implemented **Machine Learning** powered predictive analytics solution for data quality and completeness checks, cutting necessary manual intervention by almost **50%**

Data Science & Bioinformatics Intern

Jun 2022 – Jul 2022

Manus Bio Inc

Augusta, GA

- Aided computational biology team in parsing and analyzing DNA fingerprinting data in **Python** and **R**, primarily for genetic trait improvement and novel genetic sequence detection to design commercial & industrial bio-alternatives

Projects

Financial Portfolio Analysis App | *Python - Pandas, NumPy, SciPy*

May 2024 – Present

- Leveraged **NumPy** and **Pandas** to create custom functions to perform a **Time Series** on given financial data
- Basic functionality included generating **Basic & Annualized Returns, Volatility (Sharpe Ratio), Drawdowns, & Skewness/Kurtosis**
- Advanced functionality included employing **Monte Carlo** methods to calculate **VaR/CVaR, Risk Adjusted Returns**, and for **Long-Term Value Projections**

Full Stack E-Commerce Site w/ Intelligent Financial Analysis | *Python, JavaScript, SQL*

Jun 2023 – Dec 2023

- Developed E-Commerce site using **React.JS, Tailwind CSS, & Framer Motion** for Frontend Development
- Implemented Backend functionality with **Prisma ORM, PlanetScale** to access our **MySQL** server, connecting everything to the **Stripe API**
- Leveraged **Next.JS** and **Flask** to integrate with **Python** classification algorithms built with **SciKit Learn, NumPy, and PyTorch** to generate future product recommendations
- Enhanced site administration for current **13** users of this E-Commerce platform, yielding an average **15%** increase in per-product profit for all users

Technical Skills

Languages: Python, Java, SQL, JavaScript, R, C/C++, HTML/CSS

Tools: VSCode, MATLAB, IntelliJ, RStudio, Microsoft SQL, Oracle SQL, Tableau, Apache Spark, Microsoft Azure, DBeaver, MongoDB, PrismaORM,

Frameworks/Libraries: Pandas, NumPy, TensorFlow, PyTorch, ScikitLearn, Keras, React.JS, Next.JS, Node.JS, JavaFX

Education

University of Wisconsin - Madison

Sep 2022 – May 2026

BS Computer Science + BS Data Science, Minor: Economic Analytics

Madison, WI

- **Concentration:** Software Development focused on ML Model Making, Algorithm Design, and Statistical Techniques
- **Relevant Course Topics:** Object Oriented Programming, Data Structures & Algorithms, Software Engineering, Artificial Intelligence, Matrix Methods in Machine Learning, Quantitative Analytics for Economists, Statistical Modeling, Linear Algebra, Discrete Mathematics, Econometrics, Human-Computer Interaction

Extracurriculars / Certifications

CodeForGood Student Organization | *Project Manager, Marketing Chair*

Dec 2023 – Present

- Leading a team of 10 in project ideation and development

Microsoft Azure AI Fundamentals | *AI-900*

Oct 2024

IBM Machine Learning with Python | *SciPy, SciKit Learn*

Apr 2024