

# Ethan Rohman

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## EDUCATION

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- **Drake University** Des Moines, IA  
*Bachelor of Science in Computer Science; GPA: 3.86*

## EXPERIENCE

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- **UnitedHealth Group (Surest: A UnitedHealth Care Company)** Minneapolis, MN  
*Data Science Intern* May 2022 - May 2024
  - **Data Analysis:** Conducted a comprehensive analysis of text message campaigns to assess engagement increases, utilizing Python, Pandas, and SQL for data manipulation and analysis.
  - **Machine Learning:** Developed a question-answer bot using sentence transformers and built a vector store with a custom embedding model for enhancing search capabilities, managed deployment with MLflow, and fine-tuned chat models for suggesting answers to partial questions.
  - **Search Engine Improvement:** Designed extension of search feature using embedding models, including building a custom vector store for improved search results and user experience.
  - **Interactive Development:** Solved for creating and testing with local instances of Elasticsearch to fine-tune search parameters.
  - **Data Engineering:** Contributed to complex pyspark pipelines in Databricks and Ascend, including interacting with AWS S3, employing GitHub for source control and automation in Jenkins.
  - **Presentations:** Formally presented findings and projects to groups as large as 40, demonstrating strong communication skills and the ability to translate complex technical details into business insights.
  - **Agile Methodologies:** Experienced in Agile development methodologies, actively participating in sprints, managing stories in Jira, and utilizing Notion for project documentation and collaboration.
- **DoughFlow** Project  
*repo: DoughFlow* May 2024 - July 2024
  - **Finance Web Application:** Collaborating on a finance web application using a PostgreSQL, Django, and Next.js tech stack, focusing on developing robust backend and frontend components as part of a team project.
- **Individual Senior Project** Drake University  
*repo: Informational UI Thesis Study* Jan 2024 - May 2024
  - **UI/UX Study:** Conducting a UI/UX study as a solo project, using informational document to test various UI/UX components and identify combinations that enhance user experience. Used Figma for UI/UX design mockups and for prototype testing.

## PROJECTS

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- **Question Answering Bot:** Built a deterministic outcome question-answering bot using sentence transformers, enhancing customer support operations.
- **Text Message Campaign Analysis:** Analyzed text message campaigns for a health insurance company to determine engagement increases, using data science techniques.

## PROGRAMMING SKILLS

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- **Languages:** Python, SQL, Javascript, HTML, CSS
- **Technologies/Tools:** Linux Development, Pandas, PySpark, GitHub, MLflow, Elasticsearch, Boto3, Docker, Django, PostgreSQL, Next.js, AWS, AWS CLI, Notion, Jira, Lucidchart, Figma, Databricks, Ascend

## RELATED COURSEWORK

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- **Machine Learning:** Explored development of programs that learn from data, covering key algorithms and techniques in machine learning. Topics included CNNs, Random Forests, PCA, instance-based learning, Bayesian methods, and NLP.
- **Cloud and Database Systems:** Covered virtualization, Python programming, the Hadoop ecosystem, and comprehensive use of Amazon Web Services. Also included database querying techniques with both SQL and NoSQL databases.
- **Advanced Linear Algebra:** Studied advanced concepts in linear algebra, underpinning many machine learning and data analysis algorithms.