

Raihan Rafeek

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EDUCATION

University of Cincinnati, Cincinnati, OH

Bachelor of Science in Computer Science

GPA: 3.97

May 2027

EXPERIENCE

LeopardSAT - 1

Aug 2024 - Present

CubeCats - University of Cincinnati

Cincinnati, OH

- Build simulation software for CubeSat ADCS in partnership with NASA and Nanoracks, using Pandas, NumPy, SciPy
- Apply physics models of magnetic hysteresis to improve detumbling efficiency and stability
- Optimize 6M+ point dataset preprocessing, reducing simulation runtime significantly

AI & Data Science Intern

Jan 2025 - Apr 2025

Exelixa AI

Dubai, UAE

- Deployed computer-vision attendance system, cutting manual 1-hour process to real-time with 98% efficiency gain
- Developed AI-driven automation pipelines and interactive workflows for 5 client projects
- Integrated ML prediction models (PyTorch, scikit-learn, LangChain) to meet custom requirements
- Created high-impact demos showcased at AI Everything 2025 and other UAE conferences

Undergraduate Research Assistant

Aug 2024 - Jun 2025

University of Cincinnati

Cincinnati, OH

- Assisted in the design of algorithms for feature extraction from high-dimensional datasets using Topological Data Analysis (TDA)
- Evaluated the efficiency of PCA, t-SNE, UMAP to enhance downstream model performance
- Implemented testing pipeline to benchmark the time complexity of the algorithm
- Co-authored paper on Topological Study of β -Sparsified d-Uniform Hypergraph Based Simplicial Complexes

Software Engineering Intern

Fall 2023, Summer 2024

Idaho National Laboratory

Idaho Falls, ID

- Contributed to the development of safety-critical software for nuclear inventory management using Ruby on Rails and PostgreSQL, ensuring compliance with strict regulatory standards and minimizing risk
- Implemented major changes to improve search result filtering speed by optimizing queries through a database migration and implementing caching
- Resolved 40+ bugs, including 3 critical fixes, new features, and UI/UX inconsistencies ensuring smooth and reliable application functionality
- Collaborated with engineers in an Agile environment, assisting continuous improvement while receiving mentorship from experienced professionals

PROJECTS

Gyrus | Python, LangChain, CrewAI, Exa, Electron.js, Neo4j

July 2025 - Present

- Develop a browser that uses AI to promote thinking as opposed to cognitive offloading
- Implement novel user-intent-detection model ensemble using Roberta and LangChain, achieving accuracy of 0.94
- Designed and developed Neo4j graph database to store user queries, map previous intentions and history
- Implemented Exa and CrewAI agents to handle web crawling and search based on intent

RentRadar | Python, Flask, LangChain, React, MaterialUI, PostgreSQL

May 2025 - Present

- Design and architect a full-stack web application, managing both frontend and backend components
- Deploy and maintain the application in a production environment, ensuring stability and performance
- Support 50+ active users, continuously improving functionality based on feedback and usage data
- Won 2nd Place at the 2025 CEAS Summer Innovation Challenge, raising over \$2,000

WhiteBox | Python, Neo4j, Llama 3.1, HuggingFace, Docker, ReactJS

Sep 2024 - Oct 2024

- Developed architecture for RAG using GraphDB to store and navigate concept maps of text data
- Designed database to handle over 70,000 nodes with 140,000 edges to enable conceptual queries beyond raw vector searches
- Created a pipeline leveraging fine-tuned large language models (LLMs) to visualize relationships between entities
- Implemented advanced querying techniques for efficient data retrieval in the GraphDB framework
- Won Best Hack at the Midwestcon - Future of Data Hackathon with over 70 teams

TECHNICAL SKILLS

Languages: Python, Ruby, JavaScript, TypeScript, C++, C#, Java

Frameworks & Libraries: Flask, Rails, Angular, ReactJS, Electron.js, Pandas, NumPy, Matplotlib, Scikit-learn, SciPy

Databases & Query Languages: MySQL, Postgres, Cypher

AI & Machine Learning: BERT, LLaMA, OpenAI, Torch, TensorFlow, HuggingFace Transformers, LangChain

Tools & Scripting: Git, Docker, Postman, Zsh, Bash, PowerShell

Creative & Hardware Skills: Video & Photo Editing, Digital Audio Workstation (DAW), 3-D Printing, Digital Marketing

ACHIEVEMENTS

Scholarships: NEXT Innovation Scholar, CEAS International Outreach Scholar

Awards: Dean's List, 3x Hackathon Winner, Raised \$500 at UC Startup Weekend 2024