ROHIT RAMESH

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EDUCATION

Bachelor of Science in Computer Science **Expected Graduation: August 2029**
University of Cincinnati, Cincinnati, OH ***GPA: 3.98/4.00***

- University Honors Program (UHP); CEAS International Outreach Scholar; UC Global Scholar

PROJECTS

NeedleHelp | *University of Cincinnati, Cincinnati, OH* *March 2025* - May 2025

- Built an ML predictive model using Scikit-learn's Random Forest and Pandas, deploying it via a Flask REST API to stream real-time surgical guidance and integration with modern OR workflows.
- Secured 1st Place Overall at RevolutionUC 2025 among 100+ teams for innovation in surgical automation of the placement of subdermal needle electrodes

Movie Recommendation System | *University of Cincinnati, Cincinnati, OH* December 2024 - January 2025

- Developed an item-based collaborative filtering system using R and Python, boosting recommendation accuracy by 20%
- Utilized R libraries (like caret and recommenderlab) and Python (with pandas and numpy) to implement the filtering algorithm for optimized movie suggestions

EXPERIENCE

Software Engineering Intern | *Phillips Edison & Company* August 2025 - Present

- Modernized legacy systems by engineering REST APIs in MRI Logic Builder, tested via Postman, and configuring Power Automate workflows to replace direct SQL with secure JSON data processing
- Developed a custom API wrapper with OpenAI's GPT and RAG to extract and store categorized JSON data from
- 25+ legal documents in Azure Cosmos DB, automating accurate information retrieval
- Developed an end-to-end ETL pipeline for processing 400+ daily emails using Azure AI Studios, Azure Data Factory, and PySpark, reducing processing time by 95% and implementing robust error handling and data validation mechanisms

Undergraduate Research Fellow | *Extended Reality Lab, University of Cincinnati* *April* 2025 - Present

- Engineered an end-to-end computer vision pipeline using YOLOv8, OpenCV, Pandas, and Seaborn for real-time vehicle tracking, generating dynamic motion heatmaps that provide actionable insights into traffic flow and density patterns
- Architected an automated synthetic-data pipeline in Unreal Engine and NVIDIA Omniverse, integrating 3D Digital Twin reprojection and LLM summaries to slash manual labeling time by 70%
- Developed a multi-agent LLM framework using MTConnect which enables real-time fault diagnosis, machine control, and remote process optimization for industry partners

TECHNICAL SKILLS

Programming: Python (Flask), R, SQL, JavaScript/TypeScript (React, Next JS), C++
AI/ML: PyTorch, OpenCV, TensorFlow, Scikit-learn, Pandas, Seaborn
Databases: MySQL, Microsoft SQL Server, SQLite, PostgreSQL
Language: French (B1), German (B1), Sanskrit (A2), Polish (A2), Hindi (B1), Tamil (C1)

LEADERSHIP, ACTIVITIES, & SERVICE

Sub-Team Lead | *Bearcats Electric Vehicle Club, University of Cincinnati* August 2024 - Present

- Develop a touchscreen interface to display real-time battery status using C and C++
- Optimize battery monitoring solutions to ensure efficient vehicle performance

Mentor | *Bearcat Coders, University of Cincinnati* January 2025 - Present

- Guide 20+ high school students in web design basics including HTML, CSS, and JavaScript
- Tutor students in Python and helped them develop skills in project design

AWARDS & HONORS

CEAS Dean's List 2024 - 2025
University of Cincinnati- College of Engineering and Applied Science
Attestation of Excellency Alliance Francaise de Madras 2019 - 2023
Alliance Francaise, Chennai, India
GIIS Global Citizen Scholar 2018 - 2019
Global Indian International School, Punggol, Singapore

AVAILABLE FOR CO-OP/INTERNSHIP: SUMMER 2026