Haluk Yuzukirmizi

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EDUCATION

University of Massachusetts Amherst   Expected Graduation : May 2027
Manning College of Information & Computer Sciences   GPA: 4.0/4.0
B.S. in Computer Science with Minor in Business
- Relevant Coursework: Object Oriented Programming, Data Structures, Programming Methodology, Multivariate Calculus, Discrete Math, Statistics
- Awards: Commonwealth Honors College, Massachusetts High Demand Scholarship Recipient, Dean's List Honors (Fall 2023 - Spring 2025)

EXPERIENCE

Artificial Intelligence Intern   **Amherst, MA**
Commonwealth of Massachusetts - AI for the Commonwealth Program   *Apr 2025 - Aug 2025*
- Built and deployed multi-modal Retrieval-Augmented Generation chatbot & Slack bot for the Unity High-Performance Computing platform, improving documentation accessibility and cutting average solution time from 30 minutes(help-desk request) to 7.5 seconds for 2000+ users.
- Developed serverless AWS pipeline (Lambda, S3, EventBridge) with Langchain integration to auto-sync knowledge base from 160+ documentation sources and Slack conversations
- Achieved 85–95% technical accuracy and 12.3× cost-efficiency through advanced contextual chunking and metadata filtering methods.
- Created Streamlit web interface & admin dashboard for data management, feedback tracking, and knowledge enrichment.
- Deployed with AWS CloudFormation and GitHub Actions; supports both Lambda and ECS deployments for flexibility.
- Collaborated with Azure and AWS solution architects for hands-on training and applying cloud best practices to deployments.

Undergraduate Research Associate - Computer Vision Lab   **Amherst, MA**
UMass Early Research Scholars Program   *Sept 2024 - May 2025*
- Conducted research on minimizing human effort in object counting using DISCount, computer vision model integrating importance sampling and human-in-the-loop methods for high-resolution image analysis.
- Evaluated accuracy trade-offs between manual labeling and automated estimation using importance sampling and other statistical distributions (uniform, triangle).
- Designed performance evaluation experiments, leveraging OpenCV for image processing, Matplotlib for data visualization, and NumPy/Pandas for statistical analysis.
- Demonstrated that DISCount achieved >90% accuracy using only 20% of the data, significantly reducing manual effort.

Technical Assistant   **Amherst, MA**
Isenberg Technology Support & Service, Isenberg School of Management   *Sept 2024 - Apr 2025*
- Resolved 100+ customer tickets using ServiceNow, ensuring functionality of 765 tech machines for 322 Isenberg faculty and staff.
- Conducted daily sweeps to maintain 60 classrooms and 5 labs serving 5,000+ students; supported event tech setups.

PROJECTS   github.com/hyuzukirmizi

Maze Runner | Python, OOP, Data Structures
- Developed small game with dynamically generated mazes, implementing BFS-based pathfinding using stack, custom room data structures, optimized traversal, and efficient visited-object storage to find escape routes.

Skywalker AI Chat Bot | TypeScript, Next.js, WatsonxAI, WXFlows
- Developed AI chatbot application using Next.js and TypeScript that leverages IBM's WatsonxAI and WXFlows APIs to create an interactive, character-based AI assistant inspired by Anakin Skywalker with specialized mathematical problem-solving capabilities.

LEADERSHIP

UMass Entrepreneurship Club
- Won $2,000 in total as first-place winners in both the Fall 2023 and Spring 2024 ULaunch pitch competitions.
- Developed a shopping web page in Fall 2023 to promote local hydroponic agriculture and to connect producers with consumers.
- Created an app concept in Spring 2024 connecting UMass Dining Commons with students for prepaid dining swipe orders and peer-to-peer delivery with commission-based payments.

SKILLS

Programming Languages: Python | Java | C | JavaScript (Node.js, Next.js) | TypeScript
Tools: VS Code | AWS | Git | Azure | Jupyter | Microsoft Office | ServiceNow | API's | LangChain