

# Richard Álvarez

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## About Me

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Emerging AI Engineer and Sole Proprietor with a foundation in IT systems administration and client-focused software development. Skilled in Windows and macOS administration, Active Directory, ServiceNow, and networking (TCP/IP, DNS, DHCP, VPNs). Current work centers on applied machine learning, multi-agent systems, and deploying LLM-powered solutions for small and medium-sized businesses. Combining hands-on technical skills with AI integration to deliver tools that improve efficiency and ROI.

## Work Experience

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- AI Systems Engineer**  
*Layer 7 Systems · Contractor*

Remote  
Sep 2025 – Present

Lead engineer supporting Layer 7 Systems across AI development, IT support, and full-stack engineering. Responsibilities include designing and deploying production-grade agentic systems, maintaining internal infrastructure, integrating MCP and REST APIs, and providing technical support to client environments. Work spans AI automation, backend design, web tooling, and day-to-day IT operations for the company's service portfolio.
- Freelance Web Developer**  
*Richard Álvarez · Sole Proprietorship*

Remote  
Oct 2024 – Present

Design, build, and maintain custom web applications for clients in creative and commercial industries. Translate business needs into responsive, high-performance websites with 95%+ Lighthouse scores for speed, accessibility, and mobile optimization. Provide technical documentation and training to clients. Recently expanded services into automation and AI integration, prototyping tools with LangChain, n8n, and LLM APIs to streamline scheduling, email triage, and customer support workflows for SMBs.
- IT Support Technician**  
*BDPA National High School Coding Competition · Volunteer*

Multiple Locations  
Apr 2024 – Present

Configured and maintained 18 laptops for nine student teams at a national coding competition, including OS imaging, hardware setup, and system validation. Provided real-time troubleshooting during live events and supported faculty and judges on technical issues. Assisted in inventory management and post-event system checks.
- IT Assistant**  
*Kenyon College Library & Information Services · Part-time*

Gambier, OH  
Sep 2023 – Feb 2024

Provided campus-wide IT support, including workstation imaging, hardware deployment, and printer/AV troubleshooting. Performed secure data destruction on decommissioned drives in compliance with policy. Assisted faculty and staff with technology needs and documented recurring issues for team resolution. Streamlined maintenance scheduling by programming a spreadsheet tool automatically mapping course meetings to classroom availability.

## Education

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- Kenyon College**  
*Bachelor of Arts in Film; GPA: 3.4/4.0*  
*Minor in History; Concentration in Integrated Program in Humane Studies*

Aug 2020 – May 2024  
Gambier, OH

## Skills

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- Systems:** Windows 10/11, macOS, Linux, Active Directory  
**Networking:** TCP/IP, DNS, DHCP, VPN, firewalls, remote access  
**Security:** Endpoint protection, patch management, access controls, incident response  
**Support Tools:** ServiceNow, TeamViewer  
**Cloud:** AWS (IAM, EC2, S3), Google Workspace, VMware, Hyper-V  
**Hardware:** Device imaging, workstation setup, printer/scanner support, mobile device management

Web Projects

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**AVA Systems**

Voice AI Platform

Ongoing  
Layer 7 Systems

Co-developed a production-ready AI voice assistant (AVA) for small and medium-sized businesses, designed to automate reception, scheduling, ticket creation, and customer intake. Implemented a real-time voice pipeline integrating LLM reasoning, speech recognition, and telephony APIs.

- Designed multi-agent workflows handling customer intent classification, follow-up questioning, data validation, and domain-specific task execution.
- Integrated OpenAI, MCP servers, and custom REST APIs to perform booking, ticket creation, CRM updates, and structured data retrieval.
- Built configuration-driven modules allowing non-technical clients to customize business logic, voice behavior, and task flows.
- Supported deployment readiness by implementing test harnesses, logging/analytics, and prompt-quality monitoring to track system reliability.

**Joaquin Morales**

Portfolio

Jun 2025  
[joaquinmoralesdp.com](https://joaquinmoralesdp.com)

Designed and deployed a dynamic portfolio site for a professional cinematographer. The project used Next.js for high performance, with Tailwind CSS for responsive design. Implemented a custom CMS to enable efficient content updates, managing galleries and testimonials with ease. Leveraged DigitalOcean S3 storage for scalability and fast load times for video and photo content.

**Machine Television**

Online Store

Oct 2024  
[machinetelevision.com](https://machinetelevision.com)

Developed a functional e-commerce platform for an independent skate brand. The site was built using Next.js and Tailwind CSS for an intuitive front-end, paired with Node.js for a robust back-end infrastructure. Integrated Stripe API for seamless payment processing, optimizing user workflows across desktop and mobile.

**GREasyVocab Flashcards**

Web App

Jul 2024  
Inactive

Created a personalized GRE vocabulary tool powered by OpenAI's APIs. The application leverages LangChain to provide personalized prompts tailored to user inputted data. Developed a secure full-stack system with user authentication and database management, ensuring a smooth and customized learning experience.

Publications

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**A Retrieval-Augmented Film Recommendation System**

[Digital Kenyon](#)

May 8th 2024  
[GitHub](#)

Utilized LangChain's OpenAI integration to dynamically generate queries based on user preferences. Developed using Node.js and integrated with the OMDb and TMDb APIs to enhance movie metadata, delivering precise recommendations.

**Captivating Video Editing Secrets**

[Digital Kenyon](#)

May 23rd 2023  
[GitHub](#)

Analyzed short-format video editing trends using PySceneDetect and Deep Neural Networks for unsupervised clustering, uncovering editing patterns and creative decisions.