

Ryan McCann

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Summary

Mid-level AI and backend engineer with hands-on experience building and shipping user-facing GenAI applications in Python and React. Strong foundations in machine and reinforcement learning with an emphasis on reproducibility, evaluation, and production reliability. Open-source contributor in the Red Hat ecosystem and co-maintainer of a large-scale simulation platform used by researchers and industry collaborators. Comfortable owning systems end to end, from data ingestion and model usage to APIs, testing, deployment, and CI/CD.

Selected AI Project

AI Resume Builder

2025

- Built and shipped a production GenAI application using the OpenAI API to generate structured, role-specific resumes and cover letters via guided prompt flows.
- Implemented end-to-end production infrastructure including Firebase auth and data storage, Stripe billing (checkout and webhooks), and deployment on Vercel, with robust handling of API failures and latency.

Remote Experience

Open-Source Collaborator | Podman (Red Hat Ecosystem)

Nov. 2025

- Implemented core runtime features in Golang, including a no-session exec mode that reduced execution overhead by 2.7 times in production.
- Added cross-platform integration tests (Fedora, Windows, macOS) and collaborated with Red Hat engineers via upstream reviews to improve CI stability and release quality.

Research Engineer | University of Massachusetts Lowell

Sept. 2022 – Present

- Co-maintainer of FUSION, an open-source simulation platform used by academic and industry collaborators (including AT&T, Red Hat, and MIT).
- Owned CI/CD reliability with over 2,000 automated tests and built Python-based experiment pipelines enabling configuration-driven runs, multi-seed evaluation, and metrics aggregation.
- Integrated and benchmarked reinforcement learning agents with a focus on experimental rigor and interpretability, published in a peer-reviewed IEEE paper.

Firmware Validation Intern | Zebra Technologies

Jan. – Sept. 2022

- Built Python-based automation and validation tooling for Wi-Fi 6 firmware on Linux, integrating 15+ test suites into Jenkins CI pipelines to reduce manual validation and improve release confidence.

Data Scientist Intern | Nference

Summers 2019 & 2020

- Maintained a production NLP/ML codebase by fixing 30+ unit tests and Python data pipelines, improving reliability of downstream ML workflows through data integrity for 100+ developers.

Education

University of Massachusetts Lowell

M.S.E. in Computer Engineering | Full Scholarship

2023

- Focus: Machine and Reinforcement Learning, Data Intensive Computing.

B.S.E. in Computer Engineering | 3.9 GPA | Magna Cum Laude, National Honors College

2022

Skills

- **AI & Systems:** Python, GenAI (OpenAI API), FastAPI, ML/RL (PyTorch), REST APIs, CI/CD (GitHub Actions, Jenkins), Linux/macOS, containers (Docker/Podman).