RYAN ZERNACH

🏛️ **AI Infrastructure** 🤖**MLOps** 💬**LLMOps** ⚙️ **DevOps** ☁️**CloudOps**

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SUMMARY

I'm Ryan, a collaborative team member & leader who enjoys simplifying architectures with every change and shipping agentic automation workflows using AI, LLM's, ML, GenAI, and speech. When building front-end & back-end solutions, I measure site uptime, infrastructure latency, accuracy, $/task, and $/quality. I've scaled apps to millions of users and have built durable infrastructure with an emphasis on observability, reusability, reliability, cost-efficiency, speed, and security. My background includes **10+ total years of Engineering, 7+ years of Python, and 6+ years of TypeScript**

TECH STACK

- LLM Ops / Semantic Kernel / LangChain / CrewAI
- OpenAPI / Agents / MCP / Voice / AI Evaluations
- Machine Learning / Scala / Java / Apache Spark
- Python / PyTorch / TensorFlow / NeuralNets
- Multi-Tasking with Codex / Copilot / Aider
- DevOps / Docker / Kubernetes / CICD
- Databases / SQL / GraphQL / NoSQL
- GCP / Azure / AWS / Cloud / SecOps

- React Native / iOS / Android / Swift / Kotlin / Expo
- TypeScript / React JS / Next JS / HTML / Streamlit
- Apple Pay / Payments / Subscriptions / Checkout
- IMAP / POP / Email Templates / Push Notifications
- SEO / Referrals / Marketing Campaign Automation
- Automations / Queues / RabbitMQ / Cron Jobs
- Admin & Ops Dashboards / CLI Tooling Scripts
- WebSockets / Flask / FastAPI / Express / DNS

EXPERIENCE

AI Engineer & Solutions Architect · **Archlife Industries Software** *(100% Remote)*   *2020 – Present*
- Automated LLM's to advertise on Reddit by reading posts & commenting on the best ones
- Deployed agentic endpoints for facilitating merchant onboarding & inventory management
- Delivered three chatbots using RAG, tool-calling, voice-powered commands, & interactive maps
- Published four social networks and two eCommerce marketplace platforms on iOS/Android/Web
- Architected powerful admin dashboards for marketing analytics, API logs, & database management
- Resolved bugs in the mapping software & bluetooth plugin for a PSTN telecommunications company
- Shipped a cross between Robinhood & Kaggle for socially exchanging stocks & crypto using scoreboards

AI Engineer & iOS/Android Engineer · **CellarTracker** *(100% Remote, Seattle)*   *2023 - 2025*
- Helped to boost the new app's ratings to 4.9 average, over 8,000+ 5-star ratings
- Wrote both the front-end & back-end for CellarChat™ LLM agent to 1M+ members
- Architected OpenAPI pipeline, fine-tuning pipeline, & LLM metrics evaluation pipeline
- Embedded Apple Pay code in the React Native mobile app to generate higher revenue
- Implemented recommended wines, activity feed posts, barcode scanning, image search
- Translated legacy API for collecting mobile app report tickets to generate HTML emails
- Developed the mobile app's analytics implementations for tracking user interactions
- Rebuilt legacy mobile app using React Native to support both iOS & Android devices
- Iteratively improved the redux store for efficient and persistent state management

Back-End & React Native Developer · **Demosphere** *(100% Remote, Washington D.C.)*   *2022 - 2023*
- Transitioned entire codebase from Javascript to Typescript for increased long-term maintainability
- Improved computational and network efficiencies by reducing load times and runs to the database
- Evaluated Google Crashlytics to reduce edge case crashes and improve p95 stability & performance
- Improved existing group chat features, push notifications, & native calendar sync to improve reviews

Back-End & React Native Developer · **FinEquities** *(100% Remote, Miami)* *2021 – 2022*
- Integrated various APIs, including: bank accounts, stocks, & cryptocurrencies
- Managed front-end, custom back-end cloud functions, & authentication endpoints
- Wrote the data visualizations logic for viewing the performance of stocks & crypto
- Built social network features: chat, user profile, posts, likes, emojis, and comments
- Constructed core functionality: copy portfolio, trending investors, & suggested stocks
- Custom-built a companion admin web dashboard to monitor the mobile app's performance

Web Developer · **instaSod.com, CustomizedChristmasLights.com** *(100% Remote, Atlanta)* *2015 – 2019*
- Built & marketed PHP websites & local businesses online to generate $500k+ of gross sales in three years
- Planned & founded two local small businesses: landscape design/contracting & professional christmas lighting
- Engineered user experience of uploading videos to website, answering questions, & receiving PDF pricing proposal

EDUCATION

Computer Science & Mathematics
Georgia Southern University • Statesboro, GA *2011 – 2012*
- Calculus, Statistics, R, Data Structures, Programming Principles, Linear Regression, Visual Basic, C, C++

Data Science
BloomTech, Y Combinator • 100% Remote • San Francisco, CA *2019 – 2020*
- Productionizing Supervised/Unsupervised Machine Learning Models, Recommendation Engines
- Deploying Computer Vision (CV) Models, Voice, Natural-Language Processing (NLP) Pipelines
- PySpark, Python, Data Engineering, SQL/NoSQL Databases, Back-End API's (Flask / FastAPI)

Machine Learning & Data Science (Teaching Assistant)
Vanderbilt University, EdX • 100% Remote • Nashville, TN *2020 – 2021*
- Through the act of teaching, I gained exposure to hundreds of machine learning applications
- Taught 900+ college students machine learning, API's, JavaScript, HTML, Python, dashboards, & databases
- Managed a busy schedule of remotely teaching 30+ university students per week for ~60 minutes per lesson

AWARDS & CERTIFICATIONS

- **2019**: *Y Combinator Startup School*
- **2019**: *AWS Cloud Practitioner*
- **2020**: *Google Cloud Developer*
- **2020**: *TensorFlow Developer*
- **2020**: *Machine Learning Pipelines*
- **2020**: *Mosh React Native Academy*
- **2022**: *Ethereum Blockchain Developer*
- **2024**: *NASA Hackathon Finalist (Top 1%)*

PORTFOLIO WEBSITE