Ryan Kuhl, M.S.

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Summary

Principal Platform Engineer with over 10 years of experience building distributed systems and machine learning infrastructure. Expert in federated learning using NVIDIA NVFlare and privacy-preserving AI. Experienced in leading cross-functional teams, mentoring engineers, and teaching computer science at the university level.

Professional Experience

Mayo Clinic Platform **Remote**
Principal Platform Engineer *03/2025 – Present*

- Developing a global platform for federated learning and analytics to train AI models on international clinical data without moving patient records.
- Replacing the legacy Mayo Clinic Cohort Visualizer with a new system that enables secure, decentralized access to worldwide patient data.
- Working directly with the NVIDIA NVFlare team as a key stakeholder to provide technical requirements and guide the development of federated learning tools.
- Managing systems for a dataset including 13.6 million patient records and 3.9 billion medical images.

University of Miami **Coral Gables, FL**
Lecturer, Computer Science *01/2025 – Present*

- Created all lectures and course materials from scratch for CSC118: Information Technology and Society.
- Teaching topics including AI ethics, technology history, the geopolitics of software, chip manufacturing, and human-computer interaction.
- Facilitating Socratic seminar sessions where students research and present deep-dive topics to small groups to encourage critical discussion.

Tatari **Remote**
Senior Machine Learning Engineer *11/2018 – 02/2025*

- Led a cross-functional project with data science and platform teams to build an automated system for selecting ad creatives using a multi-armed bandit approach.
- Mentored mid-level engineers to help them reach senior-level roles by teaching system design and engineering best practices.
- Built a high-availability gRPC microservice using Flask and AWS RDS to make machine learning models accessible to other internal services.
- Developed data pipelines using PySpark on Databricks to process large-scale television and streaming data.

TrueCar **Santa Monica, CA**
Software Engineer 3 *08/2015 – 11/2018*

- Built a Ruby on Rails API and integrations for an OEM platform responsible for over $8 million in annual revenue.
- Improved the search engine for the used car platform using ElasticSearch.
- Acted as the lead developer for Python-based platforms, including survey systems and email rendering engines.

Technical Proficiency

AI/ML:	NVIDIA NVFlare, Federated Learning, Multi-Armed Bandits, PyTorch, NLP, RL
Data Systems:	PySpark, Databricks, Delta Lake, PostgreSQL, AWS RDS, Redshift, ElasticSearch, Cassandra
Infrastructure:	Kubernetes, Docker, Helm, gRPC, Airflow, Github Actions, ArgoCD, Grafana, Terraform
Languages:	Python 3, R, SQL, Protobuf, LaTeX

Education

Georgia Institute of Technology **Atlanta, GA**
Master of Science in Computer Science, 3.90 GPA *01/2020 – 05/2024*
Specialization in Interactive Intelligence

Florida State University **Tallahassee, FL**
Bachelor of Science in Computer Science *08/2009 – 08/2014*
Minor in Applied Mathematics

Professional Engagement

PyCon US 2022 **Salt Lake City, UT**
Presenter *04/2022*

- **"GraphQL: The Devil's API"**: Spoke on the performance trade-offs and best practices for implementing GraphQL APIs.