Christopher Demirjian

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EDUCATION

Columbia University, Columbia Engineering   New York, NY
Master of Science, Computer Science: Machine Learning   May 2025
- Relevant Coursework: Machine Learning, Design for Generative AI, Analysis of Algorithms, Spoken Language Processing, Deep Learning Neural Networks, Applied Machine Learning in the Cloud.

Columbia University, Columbia College   New York, NY
Bachelor of Arts, Computer Science and Mathematics   May 2024
GPA: 3.71
- Relevant Coursework: Data Structures and Algorithms, Systems Programming, Networks, Number Theory, Artificial Intelligence, Databases, NLP, Cryptography, Cloud Computing, UI Design, Robotics, Quantitative Finance.

SKILLS

Programming Languages: Fluent in Python, Java, C, PostgreSQL, MySQL, TypeScript, HTML, Duck DB, R, P4.
Frameworks and Tools: Skilled in TensorFlow, PyTorch, REST, Pandas, Flask, jQuery, React, FAST API, Git.
Software: Expertise in Linux, Kubernetes, Docker, Object Oriented Programming, AWS, GCP, Wireshark, Terraform.

WORK EXPERIENCE

Academic Tutor, Columbia Athletics   New York, NY
Graduate Student Tutor   Feb 2025 - May 2025
- Delivered personalized one-on-one tutoring in advanced math and computer science (e.g., Computer Networks, NLP, Calculus III, Discrete Math) to six student-athletes, improving comprehension and academic performance.
- Created custom lesson plans and practice problems, catering to unique schedules and learning styles of each athlete.

IBM Accelerate Program   Armonk, NY
Software Development Intern   Jun 2022 - Aug 2022
- Learned front-end and back-end software fundamentals in 5 projects incorporating Python, JavaScript, React, versioning, application security, project management, GitHub, and software development lifecycle (SDLC).
- Refined both analytical and project management skills such as critical thinking, collaboration, communication, and Agile work method through brainstorming and coding in groups of 5 developers.
- Programmed in JavaScript, React, styling, security, and Cloud Native Development.

PROJECTS

Applied Machine Learning in the Cloud, Columbia Graduate Level Course   Jan 2025 - May 2025
- Built end-to-end Large Language Model fine-tuning pipeline in Google Kubernetes Engine with Nvidia L4 GPUs.
- Fine-tuned Google's Gemma-2B LLM utilizing Docker Containers, Kubernetes Jobs and custom web-scraped data.
- Optimized fine-tuning process by 30% with model quantization, low rank adaptation and Hugging Face TGI.

Cloud Computing, Columbia Graduate Level Course   Sep 2023 - Dec 2023
- Led team of 7 students in developing a cloud-based application applying Agile methodology across 3 sprints.
- Deployed cloud application to provide end users with 3 features: real-time end statistical player/coach information lookups, up-to-date player newsfeed from various microservices, and a user discussion forum.
- Leveraged Google Cloud and AWS technologies to host application, including Elastic Compute Cloud (EC2), GCP App Engine, Docker, Cloud Databases (RDS, DynamoDB) and CI/CD pipeline.
- Engineered pub/sub-AWS Lambda function to notify discord server, IaaS Terraform script to automate deployment of AWS instances, and EC2 microservice with Fast API to allow for player lookup.

Undergraduate Research Assistant, Yale NLP Lab   May 2023 - Aug 2023
- Collaborated with 5 researchers to understand how to read, present and structure scientific research papers.
- Analyzed performance of 25 Large Language Models on Language to Code Task using L2CEval Benchmark.
- Developed interactive Python Streamlit website to dynamically display results found in L2CEval paper.

LICENSES & CERTIFICATIONS

AWS Certified Cloud Practitioner   Jan 2025 – Jan 2028
- Certified foundational understanding in AWS Networking, Storage, Databases, Security, Monitoring, and Migration.