

# Andres Restrepo

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## Work Experience

**Software Engineer II**      Sierra Nevada Corporation      Centennial, Colorado      January 2024

- Developed features and provided bugfixes in services on a full stack environment that used Typescript and React on the frontend, .NET on the backend, and SNMP for hardware interactions against a software defined radio.
- Developed a Java based application that acted as middleware between gRPC clients and services subscribed to a Kafka message broker, this application successfully integrated legacy systems maintained by two distinct teams.
- Conducted a trade study that evaluated the suitability of using Kubernetes to deploy existing services, documented results explaining scalability requirements and provided a set of helm charts as proof of concept.
- Lead a team of 4 Software Engineer Interns in an effort that used Ansible, Bash, Python and Docker Compose to automate the deployment and the configuration settings of over 15 microservices.

**Software Engineer I**      Sierra Nevada Corporation      Centennial, Colorado      August 2022 - January 2024

- Designed and implemented a backend message exchange library using C++, PInvoke and .NET, the library was used as a core component on over 10 microservices that spanned over 2 different projects.
- Created a micro frontend prototype for a React application using Webpack's Module Federation Plugin; this micro frontend prototype later turned into a reusable frontend core app that was extended by 2 different teams.
- Maintained CI/CD pipelines for the hosting, building and packaging of code using Bash, Bamboo, Bitbucket, Docker, Curl, Jfrog, Maven, Npm, .NET and Webpack.
- Used Docker Compose to deploy microservices presented in demonstrations to internal teams and external customers; demonstrations resulted in the acquisition of 3 different contracts for our team.

**Engineering Technician**      Terumo BCT      Lakewood, Colorado      July 2021 - July 2022

- Used a proprietary C++ based domain language to develop finite state machine routines that tested the life expectancy of medical devices and their subassemblies.
- Used Python to develop numerical method solutions that transformed the raw output of sensor signals into meaningful units.
- Used Python to develop scripts that performed the analysis and visualization of sensor outputs retrieved from data logs.

**Teaching Assistant**      Metropolitan State University of Denver      Denver, Colorado      August 2020 - December 2020

- Held virtual sessions in which I tutored the students of senior level mathematics courses, used LaTeX to present solutions to exams and proposed problems in class.

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## Education

**Bachelor of Science**      Metropolitan State University of Denver      Denver, Colorado      December 2020

- **Major:** Mathematics; **Minor:** Computer Science; **Honors:** Cum Laude.
- **Mathematics Coursework:** Discrete Mathematics, Probability and Statistics, Probability Theory, Linear Algebra, Abstract Algebra and Numerical Analysis.
- **Computer Science Coursework:** Data Structures and Algorithms, Computer Graphics, Machine Learning, and Software Development Methods.