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.
- Led a team of 4 Junior Software Engineers 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.

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.