Fernanda de Macedo

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SKILLS

- Programming Languages: Python, JavaScript, Java, C++
- Frameworks & Libraries: Django, Django REST Framework, Flask, FastAPI, Pytest
- DevOps & CI/CD: Docker, Kubernetes, ArgoCD
- Cloud & Infra: AWS, Redis, NGINX
- Monitoring & Logging: Graylog, Grafana, Prometheus
- Data & Messaging: PostgreSQL, RabbitMQ, Kafka
- Project & Development Practices: Agile/Scrum, clean code, test-driven development, performance tuning, system design, algorithms & data structures

EXPERIENCE

Center for Astrophysics at Harvard & Smithsonian

July 2023 - Present

Software Engineer II - Backend

Cambridge - MA

- Designed and optimized data pipelines within NASA's Astrophysics Data System (ADS) to ingest and transform high-volume research metadata, enabling scalable search and retrieval for 100M+ of documents across scientific domains.
- Implemented a full-stack redesign of a high-latency PDF generation workflow, replacing image proxy layers with direct S3-based access and restructuring asynchronous jobs, resulting in a 10x reduction in processing time and greatly improved reliability under load.
- Built and optimized backend APIs within a microservices architecture to support data-intensive, latency-sensitive research pipelines; ensured robust performance and reliability through targeted testing and tuning.
- Actively contributed to infrastructure migration efforts, deploying services across Kubernetes clusters, while maintaining strong CI/CD hygiene through tools like ArgoCD.
- Collaborated with researchers and engineering teams to develop APIs supporting scientific data workflows, and investigated and resolved cross-service issues impacting pipeline reliability and data accuracy.
- Demonstrated greenfield development ownership by writing RFCs, defining architecture for new ingestion systems, and rolling out changes across multiple services, environments, and stakeholder teams.

Nubank Nov 2021 - May 2022

Software Engineer II - Platform Engineering

Remote - Brazil

- Migrated CI/CD pipelines from Jenkins to Tekton and developed automation scripts to map and migrate over 900 repositories from Bitbucket to GitHub, improving deployment efficiency for our financial applications.
- Led initiatives to automate change management processes via API integration between GitHub and Jira, making compliance processes more seamless for development teams.
- Worked extensively with cloud-based infrastructure, leveraging AWS, Docker, and Kubernetes for scalable deployment.

Avenue Code Feb 2021 - Oct 2021

Backend developer

Remote - Brazil

- Developed and maintained microservices for an Order Management System, integrating with 50+ marketplaces, migrated the application from a monolith to a microservices architecture for improved scalability and performance.
- Implemented API integrations for payment processing and order management using Django, FastAPI, and PostgreSQL.
- Utilized RabbitMQ for asynchronous message handling between services.
- Applied industry-standard engineering practices such as clean code, automated tests with 80%+ coverage, Git-based version control, CI/CD workflows, Agile methodologies (Scrum), and peer code reviews.

EDUCATION

Universidade Federal do Rio Grande do Norte

Dec 2017 Natal, Brazil

Bachelor of Science in Science and Technology

May 2015

New York, United States

Cornell University

Computer Science, One Year Study Abroad Program