Pedro Spinosa
SOFTWARE ENGINEER
Based in Brazil | Open to international relocation

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Career Objective

I am a software engineer with a strong background in AI and Machine Learning, passionate about building reliable, scalable ML Platform infrastructure and DevOps solutions. For the almost past three years, I've worked on an AI Platform team, building tools and frameworks that boost productivity and scalability for ML and data science teams, contributing to ML operations. I aim to apply my skills in software development, ML, and large-scale production systems to create impactful solutions.

Work Experience

Nubank   *São Paulo, Brazil*
Machine Learning Engineer   *Sept 2022 – Present*

- Designed and implemented a reliable, decentralized model deployment service to enable seamless integration of externally developed machine learning models within a production environment.
- Led the creation of a comprehensive process for Python library and model lifecycle management, defining versioning, updating CI/CD workflows (DevOps), and enforcing automated validation for improved maintainability and reliability.
- Built a high-performance, real-time model serving framework using FastAPI and Pydantic as core ML Platform infrastructure, empowering collaborating Machine Learning teams to create customizable endpoints with support for advanced features.
- Streamlined remote scoring workflows, improving model serving efficiency and usability through centralized orchestration, demonstrating ML platform infrastructure capabilities.
- Developed a testable and maintainable interoperable serving layer using ONNX, capable of hosting models from various frameworks to enable standardization and cross-platform compatibility for the ML Platform.
- **Skills:** MLOps, Python, Clojure, FastAPI, Kubeflow, Kubernetes, AWS, ONNX

Academic Experience

Insight Data Science Lab   *Ceara, Brazil*
Python Development Intern | NLP Researcher   *May 2021 - Aug 2022*

- Developed an application that utilizes Named Entity Recognition to identify and highlight entities within a text-based bulletin. To achieve this, the API utilizes two libraries/frameworks for building base models: SpaCy and Keras.
- Developed an ML operation tool implemented as a class enabling parallel or queued machine learning model training, resulting in a productivity increase of at least 50% by utilizing background threads.
- Created a testable and reliable monitoring class using WebSockets, providing real-time updates on machine learning model training progress and performance during each epoch for improved ML operations visibility.
- **Skills:** Python, Deep Learning, NLP/NER, Docker, PySpark, Pandas, Plotly, Seaborn, Matplotlib

Federal University of Ceara   *Ceara, Brazil*
Monitor in Data Structure and Algorithms   *Mar 2020 - Apr 2021*

- During my scholarship monitoring experience, I gained valuable knowledge in the field of data structures and their ordering, as well as algorithms and their complexities.
- **Skills:** C/C++, Java, Python, Data Structure, Algorithms, Time complexity analysis

Education

Federal University of Ceara   *Ceara, Brazil*
B.S in Computer Science   *Jan 2019 - Dec 2023*

- Programming and Data Struture Mentor
- **Course highlights:** Data Structures, Algorithm complexity analysis, Artificial intelligence, Machine learning

Skills

Programming	Clojure, Python (FastAPI, PyTorch, TensorFlow/Keras, Spacy, Pandas, NumPy, Scikit-learn, etc.), C/C++, Java
Knowledges	Software Engineering, AI/ML, MLOps, NLP, LLM, Computer Vision
Tools & Frameworks	Kubernetes(Production, Large Scale), Kubeflow, AWS, Grafana, Kafka, MongoDB, Postgres, MySQL, Docker
Languages	Portuguese(Native), English(Intermediate)