Wanderson Gomes de Souza

Machine Learning Engineer

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PROFILE

Machine Learning Engineer with a Ph.D. in Mechanical Engineering, and both a M.Sc. and B.Sc. degree in Computer Science. Over 8 years of experience in developing AI solutions, working across natural language processing and computer vision, with recent focus on facial recognition, liveness detection, and head pose estimation. Strong analytical mindset with end-to-end expertise in model development, from data preparation to deployment. Experienced in leading AI initiatives and coordinating cross-functional teams to deliver scalable, efficient solutions tailored for edge devices. Contributes to high-impact, technically demanding projects with a strong emphasis on value delivery.

PROFESSIONAL EXPERIENCE

Venturus 04/2024 – present

Machine Learning Engineer

- Led end-to-end computer vision initiatives, from model architecture design to deployment on edge devices.
- Developed IR-based face recognition models achieving up to 97% accuracy in controlled environments, with strong generalization to challenging conditions.
- Converted and optimized a unified detection model (body, pet, doll, face) for deployment on low-power embedded devices.
- Created liveness detection solutions aligned with iBeta level 1 certification standards.

iTriad 04/2023 – 04/2024

Machine Learning Engineer

- Designs and integrates machine learning system lifecycles using state-of-the-art technologies.
- Develops and implements continuous pipelines for training, testing, and validating deep learning models.
- Optimizes models using advanced techniques such as pruning, quantization, knowledge distillation, and data augmentation.
- Converts complex model architectures for efficient deployment on embedded devices and in the cloud.

NEOPTO 01/2021 – 04/2023

Data Scientist

- Implemented crawling mechanisms to scan web services and collect relevant data for the project
- Developed and integrated large-scale, distributed machine learning system lifecycles using cutting-edge open-source technologies
- Modeled and implemented databases with capabilities for storage, indexing, and management of large-scale data
- Developed algorithms for preprocessing and standardizing textual data from heterogeneous sources
- Trained, tested, and validated machine learning models

EDUCATION

PhD, Mechanical Engineer 09/2019
Federal University of Paraíba (UFPB)

MSc in Computer Science 01/2014
Federal University of Paraíba (UFPB)

BSc in Computer Science 12/2009
State University of Paraíba (UEPB)

CERTIFICATIONS AND ADDITIONAL COURSES

Build Generative Adversarial Networks 2023
Coursera

NATURAL LANGUAGE PROCESSING WITH CLASSIFICATION AND VECTOR SPACES 2020
Coursera

IMPROVING DEEP NEURAL NETWORKS: HYPERPARAMETER TUNING, REGULARIZATION AND OPTIMIZATION 2020
Coursera

Math for Machine Learning 2020
Amazon

SCRUM FUNDAMENTALS CERTIFIED (SFC™) 2020
SCRUMstudy

SKILLS

- Experienced in Python for data manipulation, extraction, and analysis, with strong proficiency in libraries such as NumPy, SciPy, Pandas, and PySpark for numerical computing and scalable data workflows.
- Proficient in machine learning and deep learning for real-world applications, including computer vision, natural language processing, and model compression.
- Hands-on with MLOps tools such as MLflow (experiment tracking), Airflow (pipeline orchestration), Docker (containerization), and Google Cloud (Compute Engine, Container Registry); familiar with Grafana for monitoring.
- Strong experience in leading technical initiatives, having owned and delivered at least 7 AI projects with measurable impact and positive customer feedback.
- Drives the technical planning phase of AI projects, including system design, modeling strategy, and technology stack decisions.
- Passionate about innovation, research, and knowledge sharing; self-driven and committed to continuous learning and improvement.

LANGUAGES

English ●●●●○

AWARDS

Semifinalist in the Santander 2K17 Entrepreneurial University Program 2017
The objective of the contest is to encourage entrepreneurial ideas and projects from all over Brazil, mobilizing three target audiences: university students, startups, and microentrepreneurs.
http://www.ufpb.br/antigo/content/professor-e-estudantes-da-ufpb-s%C3%A3o-semifinalistas-do-empreenda-santander-2k17