Miguel Â. Simões Valente

https://miguelvalente.xyz

Email : miguelvalente@protonmail.com

Mobile : *On Request*

EDUCATION

Utrecht University   Utrecht, Netherlands
Master of Science in Artificial Intelligence   *Sep. 2019 - Feb. 2022*
- **Thesis**: Generative Based Zero-Shot Learning: Classifying Images from Text

Instituto Politécnico de Castelo Branco   Castelo Branco, Portugal
Bachelor of Computer Engineering   *Aug. 2016 – Jun. 2019*
- **Thesis**: Compendium of three publications in applied object detection. [1], [2], [3]

EXPERIENCE

Prosus   Amsterdam, Netherlands
Machine Learning Engineer   *Oct 2023 - Present*
- **LLM Analysis, Data Analytics & User Communications**: My responsibilities encompass data analytics, tracking customer communication interactions, and technical development. I analyze user interactions with our Slack-based chatbot, employing Large Language Models (LLMs) for comprehensive data analysis while maintaining confidentiality. I extract crucial metrics to gauge customer engagement and actively contribute to the development and enhancement of the chatbot's technical codebase. Using MongoDB, Databricks, AWS, OpenAI's API.

Redaka   The Hague, Netherlands
Software Enginner — Freelancer   *Feb 2023 - Aug 2023*
- **Text Image Translation**: Led the full-cycle development of the Redaka WebApp. Redaka enables users to register and pay for specialized text translation in images using a custom-built online image editor, with added custom solutions for text translation utilizing Gengoo, Google Translation, and OCR technologies, plus advanced computer vision inpainting techniques. Responsibilities included backend development with FastAPI, CI implementation via GitHub Actions, deployment on GCP, coordinating subcontracted frontend development, integrating Stripe for payments, and managing client interactions.

Oddity.ai   Utrecht, Netherlands
Deep Learning Developer   *May 2022 - Dec 2022*
- **Violence Detection**: Designed and optimized deep learning models in PyTorch and TensorFlow, incorporating CNNs, RNNs, and advanced techniques for action recognition, and streamlined experimentation using Weights & Biases. Enhanced performance through ONNX and TensorRT, integrating with a Rust backend for accelerated inference.

TNO (Netherlands Organization for Applied Scientific Research)   The Hague, Netherlands
Deep Learning Research Intern   *Feb 2021 - Dec 2021*
- **PyTorch Modelling & Applied Research** : Developed a zero-shot image classification system using text embeddings by encoding noisy text into class-specific embeddings and employing Normalizing Flows to generate images for underrepresented classes. Enhanced classifier training with both real and synthetic images for improved zero-shot performance. Utilized vector space techniques, pre-trained networks from the timm library, and advanced HuggingFace models for image and text encoding, sourcing data from ImageNet and Wikipedia.

Evox   Castelo Branco, Portugal
Deep Learning Developer   *Sep 2018 - Jun 2019*
- **MVP for Waste Container Detection**: Created a dataset from the ground up, which was then used to fine-tune a YOLOv2 model. Deployed the model on a Jetson Nano. This effort culminated in three published works [1], [2], [3]. The publications included a review of a traditional computer vision approach leveraging ORB features and VLAD. Employed technologies like YOLOv2 darknet in C++ and OpenCV.