Vairo Di Pasquale

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Artificial Intelligence graduate having 6+ yrs **development** experience, looking for **Machine Learning** roles.
40% of my first name is already "AI", isn't it enough?

Experience

Machine Learning Software Engineer January 2023 – Present
Polar Frequency *Remote*

- Responsible for developing and maintaining Machine Learning, Deep Learning, and Natural Language Processing microservices in my Data Science team.
- **Skills:** Python, Transformers, TensorFlow, PyTorch, Huggingface, OpenAI, LangChain, Docker.

AI/ML Consultant/Developer February 2023 – Present
Contractor *EU/US*

- Specialized Machine Learning Engineer and Full Stack Developer with a focus on accelerating AI adoption via tool creation and deployment.
- Spearheaded the AI transition for various companies in EU/US, rapidly moving from concept to research and deployment.
- Possess in-depth expertise in computer vision and large language models, enabling effective solution provision.
- Effectively partnered with stakeholders and tech teams to implement solutions that fulfill client requirements.
- Key projects include the creation of AI tools, deployment of large language models (LLMs), and implementation of computer vision solutions for various industries.
- Generated impactful contributions in the AI and ML space for companies of varying sizes.
- **Skills:** PyTorch, Tensorflow, CUDA, TensorRT, AWS, GCP, Docker, Kubernetes, Typescript, React, GraphQL, Nginx, Threejs, PLY/STL, Transformers, LangChain, and LlamaIndex.

Education

Master's degree - Artificial Intelligence Bologna, Italy
Alma Mater Studiorum *October 2020 - Present*

- Research in Machine Learning, Deep Learning, Natural Language Processing, and Computer Vision.
- Current **GPA: 4.0** (Italian Grading: 29/30). Awarded partial fee refund due to honors.

Exchange Student - Artificial Intelligence Sundsvall, Sweden
Mid Sweden University *January 2022 - June 2022*

- Main research topics: Natural Language Processing, Data Mining.
- Continuous exposure to ex-pats leading to the successful completion of a **C2 English** exam.

Bachelor's degree - Computer Science Bologna, Italy
Alma Mater Studiorum *October 2020*

- Coursework: Algorithms and Data Structures, Software Engineering, Operating Systems, Mobile App Development, Language Theory, Computability, and Complexity.
- The thesis result has supported the work that has culminated with a **peer-reviewed paper** presented at FACS 2021.

Projects

Stance Prediction | *Python, PyTorch, Transformers* April 2022 – July 2022

- NLP project about Implicit Stance Prediction on Political Debates using Speech features.
- Different models to address the task, using BART, BERT, DistilBERT, wav2vec2 and MulT, the best of which reached an accuracy of **94,2%** on the test set.

Fact Checking & **POS Tagging** | *Python, Keras, Tensorflow, Scikit Learn* November 2021 – December 2021

- NLP tasks about verifying the reliability of some statements by comparing with a given knowledge and the process of marking up words in a text with the correspondent grammatical tag.

AshtonTablutAgent | *Java, Game Theory, MinMax, Tree Search* October 2021 – November 2021

- Java-based intelligent agent able to play Tablut using MinMax algorithm.

AstroNet | *Python, Keras, Tensorflow, Scikit Learn* June 2021 – September 2021

- Deep Learning approaches for detection and classification of astronomical sources from radio images.
- Implementation from scratch of YOLOv4 and U-Net, with the latter reaching an accuracy of **97,3%**.

Corinne-2 | *Python* June 2020 – September 2020

- Extends and greatly improves "Corinne", a tool for modeling Choreography Automata.
- Presented as a Bachelor's Thesis and 1 year later presented as a published **peer-reviewed paper** at FACS 2021.

ToDaily | *Java, Android, Android Studio* May 2020 – July 2020

- Android App for managing daily tasks.

Contributions & Extracurricular Activities

Contributions in Open Source May 2022 – Present
*Active contributor for the **LangChain**'s repo and for **OpenAI**'s Gym, Minigrid, and Procgen.*

AI Mentor for Ideathon & GDSC Europe collaborator September 2022 – Present
Selected for mentoring in AI/ML for the Ideathon and GDSC Europe events. *Europe*

Google Solution Challenge March 2022 – June 2022
*Presented **Freebye**, Android App for incentivize circular economy and waste reduction.*

Core Member of a Google Developer Student Club September 2021 – Present
Managing and organizing events in a GDSC with 200+ students. *Bologna, Italy*

Online Summer School, Artificial Intelligence June 2021 for 2 weeks
Main topics: Robotics, Computer Vision, AI for Medical Applications. *Nankai University, China*

More Certifications November 2021 – December 2021
"Advanced Deep Learning with Keras" & "Data Scientist with Python" on DataCamp.

Publications

Corinne, a Tool for Choreography Automata October 2021
FACS 2021: Formal Aspects of Component *Springer, Cham*

- Developed a major extension of *Corinne*, a Python tool for reading, composing and projection of the Choreography Automata.
- Presented at a peer-reviewed conference hosted by FACS.

Technical Skills

Research field: Deep Learning, Machine Learning, Natural Language Processing, Reinforcement Learning.
Libraries: SciPy (NumPy, Pandas, ...), SciKits (scikit-learn, scikit-image), Tensorflow, Keras, PyTorch, OpenAI Gym, Matplotlib, OpenCV, Flutter, LangChain.
Technologies: Python, Linux, Windows, Git, Node, Jupyter.
Human Languages: English (C2), Italian (Native), Spanish (Current Learning).