

# Lorenzo Palaia

SOFTWARE ENGINEER · COMPUTER AND AUTOMATIC ENGINEERING GRAD

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## Education

### Computer and Automatic Engineering

Sapienza University of Rome

🎓 BACHELOR OF SCIENCES

📅 Mar 2024

- Best Marks: **Operative Systems, Functional Programming, Programming Techniques** 4.0 GPA cum laude, **Data Structures & Algorithms, Software Design, Parallel Computing, Electronics, Web Development** 4.0 GPA

## Work Experience

### Software Developer

Freelance

</> PYTHON HTML

📅 2019 - Present

- Developed websites and applications for more than 5 private and corporate clients including **landing pages, bots** and **trackers**
- Studied requirements with customers, brought new ideas, **documented** and **maintained** after the release

## Side Projects

### Neural Style Transfer & Genre Classification

BSc Graduation Thesis

</> PYTHON TENSORFLOW

📄 GitHub Repo

- Applied the concepts of Neural Style Transfer to the spectrograms of audio sources, reduced the **output noise** by more than **90%**
- Achieved a **precision over 90%** with 4 different Genre Classification models, tested several approaches such as data augmentation techniques

### Blocktracr

Fullstack Project

</> VUE MONGODB

📄 GitHub Repo

- Built a **MEVN stack** project to track personal crypto wallets on 100+ different exchanges connected via the CCXT API
- Obtained metrics via crypto data APIs, stored user data to MongoDB and provided tracking over time, structured the reports using Chart.js library

### Arduino Oscilloscope

OS Project

</> C

📄 GitHub Repo

- Introduced continuous and buffered sampling modes **up to 8 channels** with adjustable frequency via client, handled memory leaks with Valgrind
- Prioritized **serial communication via interrupts** over polling which improved throughput and efficiency by 20%, produced the Arduino schematic

## Extra Activities

### Randstad <Code.Your.Future> AI Hackathon

Hackathon, Rome, IT

</> PYTHON TENSORFLOW

📅 Mar 2023

- Guided the development of a **job description classification** neural network in a team of 5 using Tensorflow in a 4 hour challenge
- Secured the 2nd spot out of 8 contenders, reached an **F1 score of 75%**, explored both Bag of Words and Word2Vec solutions

### Sapienza Flight Team - AUVSI SUAS competition

Computer Vision SWE, Rome, IT

</> PYTHON TENSORFLOW C

📅 Sep 2021 - Oct 2022

- Implemented the **object detection** and **terrain mapping** systems of a **UAV**, trained YOLOv5/EfficientNet models with custom datasets
- Designed the **communication protocols** between UAV and Ground Station from scratch via endpoints using Flask, restructured the labeling GUI
- Worked in a subteam of 5 and collaborated frequently with 60 people in other subteams, **migrated** the entire Flight Team **workflow to Slack**
- Earned a 15th position out of 71 entries for the Technical Design Paper in the AUVSI SUAS competition

## Skills

### Programming

Python, C, Java, Javascript, Scala, Assembly, TensorFlow, Vue, Node.js, HTML, CSS, MongoDB, PostgreSQL

### Languages

Italian - Native Speak, English - CEFR Level B2, French - CEFR Level A1