Amanda Mattos Gontijo

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Linkedin | Github | Portfolio

Skills

Programming: Python, Kotlin, Typescript, HTML, CSS, C, C++.

Languages: Portuguese (native), English (fluent), Spanish (intermediate), French (intermediate).

Frameworks and Tools: PyTorch, TensorFlow, Android, Ionic, Angular, Linux, Git, Flask, FastAPI.

Work Experience

Software Engineer - Colibri Interfaces and Technology | SEP/2024 - present

- Led the development of an **innovative eye-tracking system** designed to enhance digital **accessibility**, allowing individuals with disabilities to communicate using only eye movements;
- Created and trained a **machine learning** model for extracting features from eye images with **98%** confidence level for a maximum error margin of 2.6% of image size;
- Implemented **Scrum** and **Kanban** methodologies, enabling the team to deliver the first prototype in 6 months instead of the initially estimated 1 year;
- Built and fine-tuned the solution using **Python**, with **PyTorch** and **TensorFlow** for machine learning and **OpenCV**, **Pandas, Scikit-Learn** and **NumPy** for data processing and manipulation.

Software Development Intern - Colibri Interfaces and Technology | SEP/2022 - AUG/2024

- Developed a **multithreaded Python firmware** with **Linux**, integrated with **RaspberryPi**, converting wired assistive devices into wireless solutions for increased mobility and convenience;
- Enhanced accessibility for 50+ users by implementing new accessibility features in an **Ionic + Angular (Typescript, HTML, CSS)** web app;
- Led the creation of a native **Android application (Kotlin)** using **MediaPipe** and **Accessibility Service**, enabling full tablet control through head and face movements;
- Designed and manufactured electronic **PCBs** for assistive devices, including a head mouse adopted by 1,000+ users, improving independence and computer access.

Education

Graduate Certificate in Software Engineering | MAR/2025 -present

Pontifícia Universidade Católica de Minas Gerais

B.Sc. in Control and Automation Engineering | MAR/2019 -AUG/2024

Universidade Federal de Minas Gerais - Focus on Biomedical Engineering

Awards

1st place - Inovathon Redefine Possible | APR/2025

- Won 1st place in Inovathon - Redefine Possible, organized by GDG Santos, through the ideation and prototyping of an AI solution to transform voice into action, helping people with visual and motor disabilities access websites in an accessible way.

3rd place - Biochallenge Brasil | AUG/2023

- Won 3rd place in the 1st National Biomedical Engineering Competition, organized by Inatel, with 2 colleagues through the development of an electronic device to aid the mobility of people with visual impairments.