Marco Ulise Tighiliu

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Skills

I use the best tool for the job, if the best tool for the task at hand is not already in my toolset, I learn it while actively pursuing the task. My toolset right now contains but is not limited to:

Software Development | C++ | JavaScript, TypeScript, Node.js, bun.js | Python | Java, Spring, Hibernate | APIs | Databases | Http Requests | WebSockets | Asynchronous behavior | Concurrency | Web Development | HTML, CSS, Angular | Game Development | Unity, C# | Mechatronics Engineering | IoT, Embedded, Networking, Bluetooth | Mechanical Design | CAD(Computer Aided Design), SolidWorks, 3d printing | Electrical circuit design | Robotics System Design | Scientific notation and documentation | LaTeX |

To better grasp my skills, you can visit my portfolio website here: https://marcotighiliu.dev/

Experience

Rainbow Bucharest newsletter emails recovery: Built an app in which I utilized an IMAP bot to scrape 6000 lost customer emails from the newsletter list for the official representation of Rainbow Vaccuum cleaner Bucharest.

MicroAPIgRESTion a library designed for easily handling HTTP routes on microcontrollers. It is particularly useful for creating asynchronous REST APIs and serving websites in lightweight environments. This library enables microcontrollers to make their resources accessible to other devices efficiently.

IoTFleet.js, an easy-to-use solution for robotics applications in which multiple devices need to communicate seamlessly over-air with non-blocking IO.

HomeServer.js, an app made with IoTFleet.js which can be easily used by people with little or no programming experience to automate different aspects of their home via speech commands utilizing OpenAI's whisper Api.

ZestOnScreenCapturer, a high-frame-rate application frame capture solution designed to capture live video feed from applications in Python at up to 60 frames per second (fps). This exceeds the standard 25fps offered by OpenCV. Initially developed for smooth video game feed acquisition for AI model gameplay implementation and training.

SpringCrudApiTemplate, a template for creating restful Spring Api`s connected to a database to store user data, that can be used to fast start projects, which I utilized in creating a concept betting site called BetOnsky.

My Personal Portfolio website, a dynamic experience featuring an animated cube, each face of the cube representing a page of the website. The website is built with user experience in mind and offers an interactive way of getting familiarized with my skills. The basis of my website was extracted and built into the WebCube template, to help other people fast-start websites featuring a cube with website pages on its sides.

RewindMaze, a game I made for the Brackey's game jam with the theme rewind featuring randomly generated mazes, and the ability to rewind time. The game was featured on google play till the 16th of March 2024.

Scientific writing for Fontys: Wrote the answer book for the Mechatronics Math2 course in scientific notation using LaTeX for Fontys University of Applied Sciences.

Education

Java from Scratch Course at Software Development Academy

Learned full-stack development using Java, Spring, Hibernate and Angular

Certified SOLIDWORKS Associate in Mechanical Design

Doing a Bachelor in Mechatronics at Fontys School of Applied Sciences – since 2021, actively in a gap period

Group projects I participated in:

Human_Detection_Model, an AI model that returns 0 or 1 if a person is on screen, built for Fontys Expo project 21.

Fontys SIM, a project in which we had to build a car with a robot arm on it, that had to be able to complete a set of tasks (ex: move object from point a to b). We built a 3d printed inverse-kinematics robot arm, that communicated with the car via Bluetooth, to give the arm the ability to move freely more than 360°.