



Stradiotti Stefano

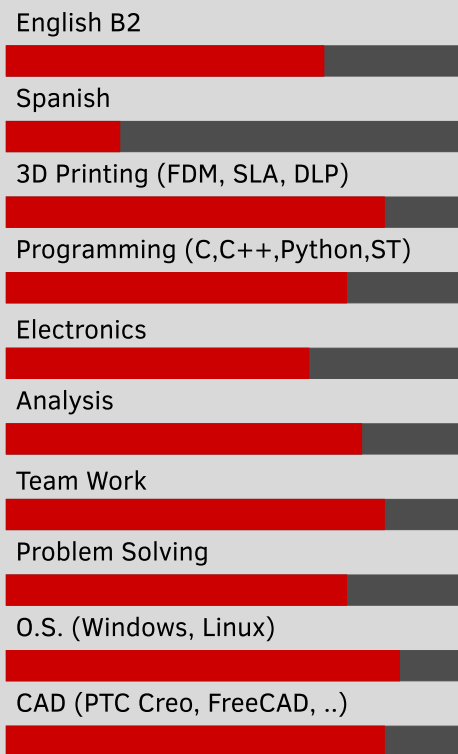
Automation Engineer

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About me

Automation Engineer passionate about scientific subjects, with a particular interest in technological innovations. Enjoys team sports and spending time in nature.

Skills



(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Experience

- from 2018 **On-site Promotional Activities Manager for TargetIn S.R.L.** Bologna
Tour Leader for B2C promotional activities, managing supplies and on-field personnel, end-of-activity reporting..
 Brands: Bref, Doria, Kikkoman, Naked, Stroilli.
Delivery and Installation of promotional material in Target's commercial activities, end-of-activity reporting.
 Brands: RedBull, Henkel, Kellog's, Doria, ThermaCare, Huggies.
- from 2016 **Maintenance Technician at Sette Note Hotel** Silvi Marina, PE
 Extraordinary maintenance of digital equipment (TV, Access Point Wi-Fi, Computer)
 Reduction of emergency technical maintenance expenses and response times through the development of a manual for regular operations.
- 2016 **Waiter at Sette Note Hotel** Silvi Marina, PE
 Improved *Booking* score from 8.4 to 9.1 in the first year of employment, reduced raw material costs by up to 30% through supply reorganization.
- 2009-2014 **Children's entertainer at Estate Ragazzi** Bologna
 In the roles of team leader and actor.

Education

- 2020-2023 **Master Degree in Automation Engineering** AlmaMater Studiorum
 Thesis: "Novel Dynamic Braille Character: cam based actuation".
 Optional exams taken:
 - Diagnosis and Control (A. Tilli)
 - Power Electronic Circuits (G. Grandi)
 - Automation Software and Design Patterns (G. Palli)
 - Wireless Sensor Networks (C. Buratti)
 - Model Predictive Control (F. Allgover)
- 2015-2019 **Bachelor Degree in Ing. dell'Automazione** AlmaMater Studiorum
 Thesis: "Impiego di materiali Piezoelettrici come trasduttori per il recupero energetico".
- 2009-2014 **Scientific Degree** L.Scientifico Augusto Righi
 "Cause storico-tecnologiche per la realizzazione del primo calcolatore".

Interests

- Home server maintenance with Cloud and Entertainment functionalities.
 "Why buy when you can build?"
- Pastry, on the side of the kneader.
- Nature and discovery enthusiast, accustomed to long-distance travels since a young age, moving is not a problem.

Additional Info

Certificates

- 2022 – IELTS English language certificate: Score (6.5) Band (B2).
- 2020 – *Elements of AI* – University of Helsinki.
- 2014 – Driver's license (B) – **Car Owner** – Experience with large vehicles.

Awards

- 02/23 – Among the top 30 best emerging ideas at Unibo *Call for StartUp* (Firefly).
- 08/23 – National finalist of the 2023 edition of the *James Dyson Award* (Braille-Fly).



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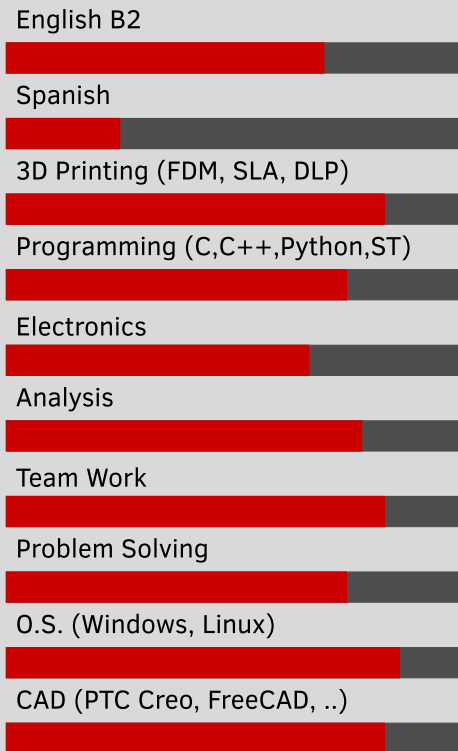
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Portfolio

Braille-Fly: low-cost Braille cell for tactile screen

Design, prototyping, and validation of a new mechatronic device for Braille character display for the visually impaired. The project's focus has been primarily economic, as similar devices already exist in the market but at a significantly high cost (around €50 per character). By utilizing mechanical cams coupled with shape memory alloy (SMA) wires for actuation, it has been demonstrated that the cost of such devices can be reduced by a factor of 10 (€5 per character). Currently, this project is participating in the "Unibo StartUp" program after being selected among the top 30 most promising projects of 2023. Furthermore, it is also a national finalist of the 2023 edition of the *James Dyson Award*.

Skills: Project Management, Cam Profiles Optimization, Microcontrollers, CAD, 3D Printing, Team Leading, Device Design.

Languages: C, C#

Home Server for Cloud and Entertainment services

Installation and management of a personal server for accessing cloud storage, media player, and virtual private network (VPN) services. Currently, the server is based on a Single Board Computer (SBC) with *ARM64* architecture and the *Linux Debian* operating system. Previously, it was based on an SBC with x86 architecture and the *Windows* o.s.

Skills: Operating Systems, Networking, TCP-IP, Device Design, CAD, 3D Printing.

Languages: HTML, PHP.

FESTO Assembly Line

Development of control software for a *FESTO* automated assembly line using an *ABB* PLC. The software is written in Structured Text using the *Codesys* IDE. It includes the implementation of the normal operation of the four workstations comprising the assembly line, as well as diagnostics to detect errors in sensors (inputs) and actuators (outputs).

Skills: Project Management, Fault Diagnosis, PLC.

Languages: ST, Ladder, C. IDEs: BR Automation Studio, Codesys.

Portable "Pong" game for Freescale MC1322x devices based on Zig-Bee Network

Reimplementation of the famous game "Pong" (*Atari*) on the *Freescale* MC1322 platform, with wireless control (2.4 GHz) implemented using the *ZigBee* protocol and compliant with the IEEE 802.15.4 standard. The setup involves 2 *Sensor Nodes* as controllers and 1 *Network Node* as screen.

Skills: Networking, ZigBee, IEEE 802.15.4, Project Management.

Languages: C++.

Design and Implementation of an optimal control law for autonomous drones working in a warehouse

Design and implementation of a linear quadratic regulator (LQR) for the control of autonomous drones used in a surveillance system. The main objective was to determine the optimal control law (*Gain Matrix* of the regulator) in order to follow a specific trajectory in space, even in the presence of disturbances.

Skills: Optimization algorithms.

Languages: Python.

Model Estimation of dynamical system and Data Classification

Identification of linear (or linearized) and nonlinear models through recursive regression algorithms, and implementation of Data Classification algorithms.

Skills: Identification and Classification algorithms.

Languages: MATLAB.

