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Roberto Santo

ABOUT ME

I started tinkering at the age of 10, I used to disassemble toys, RC cars and even old computers. Dismantling those things made me think about how all of the components inside worked, so since then i've been researching and reading every day about how electronic devices can magically just work.

My adventure with 3D printing began in 2016 just after visiting the "Maker Faire" in Rome: I was astonished by all of these strange contraptions that were in show so that I instantly bought an assembly kit online, without even knowing if I would be able to do anything good with it.

Just after a week, the kit was on my doorstep and my journey started: I learnt how to work with an Arduino board, how to produce 2D and 3D models, how to actually assemble the mechanics of my shiny-new printer and last but not least how to print something else than useless knick-knacks.

The interest in hardware was running in parallel with my 3d printing journey, I enjoyed trying out the newest development boards such as ESP boards and Raspberry Pi boards, stretching them to their computing limits.

Recently, I undertook two main projects that challenged me in many ways and improved my skills more than ever:

→ **BlazeHunter** project

BlazeHunter is an IoT solution that prevents and monitors fire hazard using **CO** (Carbon Oxide) probes and **Temperature-Humidity** sensors installed in cheap to produce and good-looking units. Me and the team developed two hardware devices that not only exchange data via radio communication, they also connect to the internet and upload the captured values on the cloud. This project is part of a national contest, we were awarded 2nd place in Oct 2018.

→ **Star Wars Laser Saber** project

The project is based on an Arduino board, a gyroscope and a digital LED strip. As you swing the saber around, you can hear some swing sounds and also the blade humming as in the movie; by clicking the button on the handle multiple times, you can change the blade colour, the humming sounds, the status of the LEDs etc.

WORK EXPERIENCE

Adec Srl, Milan, Italy – *Networking Technician*

JULY 2017 – AUGUST 2017

- Adec is a key dental clinic in Milan, they are probably the best practitioners in Italy and in line with their high-tech intraoral scanners, 3d CAT equipment etc. they also like to stay on the cutting-edge in network infrastructure so I helped them improve their equipment and make it future-proof. I installed some new UniFi APs and wired them in with two Gigabit Fiber-To-The-Home connections in a way to protect them against any network congestion or even physical fibre damage. I also managed the G Suite data migration, in few days the new accounts were created and the MX DNS record was updated in order to forward any new e-mail to the Google servers.

UniFi AP, Virtual Servers, Fiber optics, Structured Cabling, Google G-Suite, DNS.

My Maison Sas, Milan, Italy – *Hardware Developer*

MAY 2017 – JULY 2017

- Developing, prototyping and testing of an IoT devices called “SmartGates”.
Our goal was to allow a homeowner to check-in his guests almost automatically.
The device was built from the ground-up using an **ESP-8266** WiFi chip properly programmed in C++ language. The guest interacts with the system sending an SMS text: the hardware device then, during its check routine, will notice the user interaction and perform its main purpose: “clicking” the entryphone *open* key.
This “simple” hardware mod required a lot of reverse engineering and testing because no entryphone is created equal so I had to figure out all of the different way to trigger the door lock.

ESP8266, Relays C++, Arduino IDE, 3D Printing, Reverse Engineering, IoT, Twilio.

EDUCATION

O. Jannuzzi, Andria, Italy – *Information Technology*

SEP 2014 – ONGOING,

Secondary school diploma in Information Technology.

Cisco Networking Academy, Andria, Italy – *Cisco Essential & CCNA R&S*

- Basic and advanced router configuration
- Cisco devices command line configuration
- Enterprise network planning
- Routing technologies
- Wide area network study