Silvio Gregorini – Curriculum Vitae

MSc Audio Engineering Graduate

silvio.gregorini@outlook.com +39 3456951799 https://s-gregorini003.github.io/

About Me

Technical Skills

- **Hardware** Microcontrollers (Arduino, ESP32), Single-board computers (Raspberry Pi, BeagleBone), Prototyping, Serial Communication Protocols, Soldering, 3D Printing;
- **Software** TensorFlow, TF Lite, Keras, Jupyter Notebooks, Linux, Python, C/C++, GNU Octave, JUCE, Fusion 360, LaTeX;

Languages Native Proficiency in Italian, Full Professional Proficiency in English;
Interests Deep Learning, Augmented/Virtual Reality, Music Production, Drums, Electronics, Video Games, Sci-Fi, Hiking, Skiing, Digital Art;
Links Blog, LinkedIn, GitHub;

Work Experience

Freelance
Video Editor (June 2020 - Present)

- Editing of content for both technical and non-technical audiences
- Video montage, color correction, basic VFXs and audio mixing in DaVinci Resolve
- Created 50+ video lectures for Streamed, an italian educational platform for physiotherapist

GP2 S.r.l.
IoT Engineer/Consultant Pian Camuno, IT (July 2019 - Present)

- Worked on a system for real-time monitoring and predictive maintenance
- Developed a cloud software solution to manage ICES (Infrastructural Control Electronic System) platform
- Designed and implemented the sensor and communication part of the system

QPRO S.r.l.
R&D Intern Botticino, IT (March 2018 - June 2018)

- Helped in the production stages of components realized with selective laser sintering techniques
- Conducted quality control investigations on components produced through additive manufacturing
- Helped in the maintenance of an industrial SLS 3D printer (model EOS M280)

Formal Education

Leeds Beckett University Leeds, UK (2019–2020)

- MSc Audio Engineering
- Final Grade: 75% (Distinction)
- Thesis: *Small-Footprint Keyword Spotting System for Low Power Applications Using Convolutional Neural Networks*

University of Brescia Brescia, IT (2013–2018)

- BSc Mechanical and Materials Engineering
- Final Grade: 93/110 (2:1 Honours equivalent)
- Thesis: *CoCr Alloys for Biomedical Applications Produced by Additive Manufacturing: Overview on Processes, Properties and Applications*

Further Education

DeepLearning.AI Online (2020)
- DeepLearning.AI TensorFlow Developer (Coursera)
- Professional Certificate earned in March, 2020

Stanford University Online (2019)
- Machine Learning Course (Coursera)
- Certificate earned in December, 2019

Honours and Awards

Solid State Logic Award for Highest Achieving Postgraduate Student 2020

Prize awarded to the highest achieving postgraduate student (graduation 2019) by the course team for MSc Audio Engineering, Leeds Beckett University

Patents

Filed Patent N. 102020000007534 IT - April 8, 2020
- Collaborated in the patent application "Tracking and Unique Correlation System with a Structure's Parts, named Building Information System (BIS)"

Filed Patent N. 102019000013257 IT - July 30, 2019
- Collaborated in the patent application "Deformation and Cracks Analysis in Fixed and Mobile Structures Using Conductive Paint Paths"
- Contributed in the research of a material with suitable electrical and mechanical features to trace the conductive paths
- Developed the embedded system that collects data, uploads to the cloud infrastructure and manages alerts

Projects

VolcaBoy Portable Sequencer/Synthesizer September 2019 – Present

[GitHub][Blog][YouTube]
- Created a portable synthesizer from an original Game Boy DMG-01 (1989)
- Reverse engineered the console's internal electronics
- Designed and implemented the circuit for MIDI communication, sequencing functionality and GUI
- Modeled and 3D printed the enclosure and all the hardware components

Multiclass Speech Recognition on Raspberry Pi 4 January 2020 – June 2020

[GitHub][YouTube]
- Project carried on as part of the MSc Audio Engineering thesis
- Adapted CNN models from the literature to perform keyword spotting, trained on Google Colaboratory
- Coded and deployed the infrastructure on a Raspberry Pi 4, to control a smart light

Noise and Vibration Analysis of 3D Printers September 2019 – February 2020

[Blog]
- Measured airborne and structure-borne sound emitted by desktop FDM printer
- Analysed the machine's acoustic/vibration profile and identified its weaknesses
- Deployed various solutions and evaluated the improvements