CURRICULUM VITAE

Luca Tricerri
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Education
Savona High School "Liceo scientifico O.Grassi".
Master's degree in software engineering in robotics, University of Genoa.
Admitted to the engineering profession.
Degree in ancient and medieval history, University of Genoa.
National Engineers Register
English spoken (used every day)

Keywords
SCRUM, Git, cmake, OOP, **c++20,** YARP, **ROS2**, STL, **gmock, gtest**, Boost, **Linux**, **embedded**, userspace drivers, **Simulink**, i2c**,** sensors, **network**, VoIP/sip, telecom, simulators, **IoT**, test automation, ARM, **AWS**, Modelica**, Humanoid Robotics,** RTOS, Matlab**, MBD, Code coverage, GitHub, ISO21434, OCPP1.6.**

Work experiences up to now

Bitron Energy, Turin (02/2023- up to now) as an employee
Engaged in developing electric vehicle charging stations, focusing on enhancing efficiency and user experience.
I am collaborating with a multidisciplinary team to design and innovate charging solutions.
Keywords: **c++17**/Linux embedded/**gtest/gmock/code coverage/Ocpp/**git/**YOCTO**

Italian Institute of Technology IIT, Genoa (11/2017- 01/2023) as an employee
From 2019 to 2023 I was an integral part of the **iCub Tech Facility Department**, specialising in humanoid robotics and encompassing software, electronics, and mechanical development. I was actively engaged in developing embedded Linux and RTOS solutions using C++20 for the iCub Robot, a cutting-edge platform in humanoid robotics (http://www.icub.org/).
Proficient in code generation from Simulink, employing Model-Based Design principles to create C++ code. Adept at conducting Hardware-in-the-Loop (HIL) simulations using Speedgoat equipment, facilitating real-world testing scenarios.
From 2017 to 2019 I was with the **AMI department.**
Led involvement in an industrial project in collaboration with Sony Playstation, focusing on the development of a humanoid robot within the iCub facility. Demonstrated strong project coordination skills while working closely with Sony Playstation to achieve project milestones. Gained extensive experience in dynamic interaction control within the realm of humanoid robotics.
Keywords: **c++17**/Linux embedded/**PID control/Physical/ROS2/Matlab modelisation**/ stl /Yarp/ **Gazebo** /FMI-FMU /RTOS/**KUKA/**CAD-Creo/**Opencv/Simulink/Simscape/git/cmake/iCub/SCRUM/gtest/gmock**

‰ Atlas Copco, Milan (01/2017- 11-2017) as a freelance
Involved in developing electronic control instrumentation for the automotive industry.
Keywords: **c++14**/Windows/**Scrum Agile**/Boost/**STL**/SQL/Odb/Thrift/**aSpice**/cppcheck/**Jenkins/**Continuous integration**/QT** library/cross compilation on Android

‰ Siemens, Genoa (09/2010-12/2016) as a consultant
Involved in developing industrial automation (OEE) applications. International team Germany/Italy.
Keywords: **c++14**/Windows/**Scrum Agile**/OEE/Boost/**STL**/SQL/**Test Automation/**UML/JSON/XML

‰ Ericsson, Genoa (07/2010-09/2010) as a freelance
Linux embedded for optical network. Short consultancy.
Keywords: Optical networks/**embedded system/**Linux/UML

Ratioconsulta, Genoa and Milan (12/2007-07/2010) as employee
Development of VoIP/Sip server applications to be connected to Asterisk. Asterisk bugfix on RTP stack.
Keywords: **c++0x**/Linux/**Boost**/waterfall lifecycle/Sip/**Voip/Asterisk/**RTP/**NAT**

Marconi/Selex/Leonardo, Genoa (10/1999-12/2007) as an employee

I was employed in the position of **team leader** of the "Test Automation group" at the R&D project at Tetra Mobile Marconi/Selex in Genoa. This group deals with the development of SW simulations and debugging equipment for Tetra/GSM/UMTS. International team Italy/UK.
Keywords: **c++**/**Linux**/Waterfall lifecycle/**Test Automation**/Cellular networks/**Embedded system**/XML

Sistemi&Automazione, Rome (02/1998-09/1999) as an employee
I was employed in the position of a software engineer to design SimSdh.
The project involved developing a simulator for broadband networks with optical SDH protocol.
Keywords: **c++**/Windows/SDH

% Automatic Research Centre (CRA) of ENEL, Milan (06/1997-01/1998) as a consultant
I was committed as a software engineer in the project SICRE. SICRE is a real-time dynamic simulator for electrical networks.
Keywords: c++/**Unix**/stl

University of Genoa (1994-1997) as a freelance
Part-time work as a computer teacher for the course Computer Science I and Computer Science II of the faculty of electrical and computer engineering in Genoa.
Keywords: teaching/C

Work experiences with Saltwatercloud up to now

Saltwatercloud is my small firm www.saltwatercloud.com *I work at Saltwatercloud out of my working hours on the weekends and in the evening.*
Main client:

Client	Year	Keywords	Time spent on…
JRC research center https://joint-research-centre.ec.europa.eu/jrc-sites-across-europe/jrc-ispra-italy_en	**2024-up to now**	**c++20, Linux, Sensors, IoT**	**4 days/month**
University of Genova	**2024-up to now**	**Artificial intelligence**	**1 day/month**
Rapyuta-robotics Tokyo www.rapyuta-robotics.com	2021-2023	c++20, Advanced robotics	2 hours/day unlimited
Ruzzetech-Genoa	2022	Unity,c#, ROS2,c++17	7 working days package
Opal-Savona	2020-2022	Java,c++17	3 working days a month
Microelettrica-Lecco	2022	c++17, Linux, Influx2	1 working day a month
Cellply-Bologna	2020-2021	Java, IoT	2 working days a month
Ubicasrl-Genoa	2020-2023	Sensors, c++17, HTML, CSS, javascript	2 working days a month
Innoval-Genoa	**2017-up to now**	**Industrial ECU, c++98, ISO21434**	**4 days/month unlimited**
R-everse-Bologna	2018-2023	IoT and C++ scouting activity	2 hours/month
Brain valley-Milan	2017	Python	1 working day a month
Ratio consulta-Milan	2016	Java	1 working day a month

Rina-Genoa	2016	Java	1 working day a month
Jtech-Genoa	2016	Java	1 working day a month
Ing. Michelangelo Riccobene	2010-2018	Java	1 working day a month

IoT project AQUA(2012-2022)
IoT/Domotic project based on ARM9 embedded Linux and C++.
Simple PCB HW development with Eagle cad and driver in **userspace**. Simple mechanics drawings with DraftSight cad.
Keywords:c++14/boost/Linux/**embeddedARM9**/**Eaglecad**/**Android**/PHP/javascript/MYSQL/Linaro toolchain/**gcc/bash/kernel compilation/Apache**/ssh tunnelling/**MQTT/**I2c/W1 Bus.

Degree thesis on mobile robotics
It was about an operating system for mobile **robotics** ETHNOS. Prof. R.Zaccaria Dist.
I followed the threads and processes scheduler.

Open-source project on GitHub (https://github.com/triccyx)

Alica framework: a language for interactive cooperative agents(2022)
Deeply refactoring the code and architecture.
https://github.com/rapyuta-robotics/alica
Keywords: Robotics,c++20

Simulink model for FT sensor(2021)
Development and auto code generation in C++.
https://github.com/robotology/icub-firmware-models
Keywords: Simulink, Robotics,c++17

DiagnosticDaemon (2020)
Development.
https://github.com/robotology/diagnosticdaemon
Keywords: Linux, Robotics, Gazebo,c++17

Blocktest (2019-2022) and plugins
Development.
https://github.com/robotology/blocktest
Keywords: Linux,Robotics,Gazebo,c++17

Gazebo-fmi (2018)
Bugfix and development.
https://github.com/robotology/gazebo-fmi
Keywords: Linux,Robotics,FMI,Gazebo,Modelica,c++

sdf-Modelica (2018)
Bugfix.
https://github.com/robotology/sdf-modelica
Keywords: Linux, Robotics, Modelica,c++

Open-source Asterisk (2008)
Bugfix on sip and RTP stack for Nat transversal.
Keywords: Linux/Sip/Voip/C, Nat, **Asterisk**

Tools

gcc4.x, gcc9.x, gdb, Valgrind, **CMake**, makefile, ccache, distcc , **VI**, Netbean, Android Dev Studio, **MSVS2019**, IntelliJ, Eagle Cad, Freecad, Linaro-cross-toolchain, **svn**, Tfs, Clearcase, Eclipse, **ssh,** git, Wireshark, Jenkins, cppcheck, cppunit, QTCreator, CMake, **Keil**, Autocad Fusion 360, MySQL, **git, Eclipse, Matlab, Simulink, Simscape**

Library, c++

Boost, OpenCV, Mosquitto, mysql++, Odb, Thrift, QT, Xerces, CORBA, DBus

Programming languages

c++17, c, bash, **Java**, Javascript, typescript, CSS, html5, PHP, **SQL**, **UML,** Modelica, Matlab, Simulink

Unit test

gtest-gmock(c++), Junit-Mokito(Java)

IoT

Moquitto, **Amazon AWS IOT**, MQTT

Hardware

I2c-bus, w1-bus, GPIO,Pcf8574, Mcp3221, Tsl2561, Bmp180, DS2482,Stm32f103,Arduino, CAN

Cad

 Autocad Fusion 360, Creo, EagleCad(PCB)

Control and numeric

Modelica, Matlab**, Simulink**

Others

TCP, UDP, REST, C#, Arm9, **Amazon AWS,** VoIP, Tetra, sip,3D printing, GitHub

And ...

Deep knowledge of Renaissance and modern cartography (1400-1700 a.C.)
Deep knowledge of the late bronze age civilisation (1500-1100 b.C.)

Personal web site

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Interest

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Reference

Abhishek Sharma team leader of DIS at Rapyuta abhishek.sharma@rapyuta-robotics.com
Marco Maggiali head of iCub-Tech at IIT marco.maggiali@iit.it
Lorenzo Natale principal investigator of HSP at IIT lorenzo.natale@iit.it
Daniele Pucci principal investigator at Dynamic interaction control lab of ICub facility at IIT daniele.pucci@iit.it
Michael Gossen head of OEE project at Siemens Michael.Gossen@siemens.com
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