

First Last

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Education

University City, Country Bachelor of Science in Computer Engineering	2012 – 2018
University City, Country Master of Science in Computer Engineering	2018 – 2021

Skills

Programming: C/C++, Java, Kotlin, Python, JavaScript/TypeScript, PHP, SQL
Frameworks: Angular, Spring Boot, Hibernate, SQLAlchemy, MongoDB, Google Firestore, Node.js, RxJS, React Native, FastAPI, QT, Yocto
Tools: Git, Docker, UML
Platforms: Linux, Windows
Languages: Italian (native), English (fluent)

Experience

Organization City, Country <i>Researcher Intern</i>	Mar – Nov 2021
<ul style="list-style-type: none">Designed an object-oriented framework allowing Internet of Things devices to create a digital identity autonomously and to access online services in a secure way according to the W3C standards Decentralized Identifiers and Verifiable Credentials.Developed the full stack implementation of the proposed design in Python testing each use case by defining a test suite including unit, integration and e2e test cases reaching 95% code coverage.Compiled and installed a custom Linux distribution using the Yocto project toolchain by writing a new meta-layer including all the necessary recipes resulting in a minimal image compatible with the i.MX6 architecture.Tested and optimized the framework in a real use case scenario by profiling the CPU and memory usage to optimize the code and to reduce the needed resources.Developed REST API using FastAPI to define an Identity-as-a-Service allowing constrained IoT devices to access the framework functionalities.Designed and implemented a demo single-page application in Angular allowing the user to use the framework acting as an IoT device in an interactive way thanks to a user-friendly interface.	

Projects

Cooperative rich text editor <i>Team-based, C++, QT</i>	Lug – Sep 2020
<ul style="list-style-type: none">Implemented a CRDT algorithm using a LSEQ allocation strategy to work on shared documents by send and format characters in real time through multiple clients.Extended QT rich text editor classes to integrate the core algorithm by allowing users to work on the documents using a GUI and see which users are currently connected on the same document.	
REST APIs virtual labs management system <i>Team-based, Java, Spring Boot, Angular, TypeScript, Angular Material</i>	
<ul style="list-style-type: none">Built REST APIs that allow management of courses, students and resources to be shared among virtual machines accessed by multiple users.Implemented JWT based security mechanism to manage the authentication and authorization of API endpoints.Created API documentation by defining a test suite using Swagger that resulted in full code coverage.	
Digital record student system <i>Team-based, Javascript, PHP, SQL, Bootstrap</i>	
<ul style="list-style-type: none">Worked in a 7-developers team following the SCRUM methodology to create a digital record system for school management (students, courses, assignments, announcements).Implemented multiple web pages building responsive layouts and server-side features allowing users to grant access to different features based on an authentication mechanism.	