DANIELE BORTOLUZZI

Software and IoT Architect / R&D

CONTACT

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SKILLS

- Java
- Linux
- Scala
- Spring Framework
- C++
- Typescript
- ROS2
- Python

- Teamwork
- Problem-solving
- Mentoring
- Leadership
- Innovation
- Decision-making
- Communication
- Negotiation

PROFILE

I'm a computer scientist with 15 years of professional experience and a passion for IT and new technologies.
I design architectures and frameworks using Java and Python. My research focuses on swarm robotics and the Internet of Things (IoT), creating and implementing solutions for *embedded devices*, *rovers*, *robots*, and *drones*.

WORK EXPERIENCE

Research Fellow   **03/2023 – now**
University of Turin, Department of Computer Science

Within the MoVeRe research group at the University of Turin, I conduct research activities related to the Aggregate Programming paradigm, which allows leveraging coordination between heterogeneous entities.

- Participation in the PRIN 2020 project named COMMON-WEARS.
- Collaboration in the organization and development of verticalizations and PoC in the Smart Mobility and Industry 4.0 sectors.
- Teaching support activities for the courses "Web Technologies" and "Programming for mobile devices".

Technologies include:

- ROS2 (Python, C++), Gazebo (Python), Zephyr (C, C++), Arduino (C), Spring Boot (Java), Angular (Typescript).

Achievements include:

- A new platform for IoT and robotics using Aggregate Programming and ROS2.
- Working on PRIN and European projects, using R&D tecnology in specialized industry.
- Published some research papers related to Aggregate Programming.

Solution Architect   **10/2021 – 03/2023**
GFT Italia S.r.l. (Turin)

Consulting activities in software architectural analysis and design for microservices for insurance market clients.

- Technical reference and coordination of development teams.
- Technical training and coaching activities for resources.
- Design and coordination of the IT solution for the new core customer registry system for a lead insurance group.

EDUCATION

09/2013 – 07/2022

Master's Degree in Computer Science (Level 7 EQF)
University of Turin

Graduation grade: *110/110 with honors and dignity of printing*.

09/2007 – 06/2011

Bachelor's Degree in Computer Science (Level 6 EQF)
Ca' Foscari University of Venice

Graduation grade: *104/110*.

09/2002 – 06/2007

Scientific High School Diploma
Liceo Scientifico Statale "G. Marconi" di Conegliano (TV)
National Plan for Informatics.
Final grade: 90/100.

PUBLICATIONS

A. Basso, D. Bortoluzzi, G.Torta, D. Pau, L. Chariglione, F. Damiani.
"Architecture standardization for AI deployment on tiny microcontrollers",
Proc. of the 12th IEEE Int. Conf. on Consumer Technology, 2-6 September 2022, Berlin (Germany)

A. Basso, D. Bortoluzzi and G. Torta.
"Implementation of an IoT Wearable Prototype on a Standard AI Architecture," 2022 IEEE Intl Conf on Dependable, Autonomic and Secure Computing, Intl Conf on Pervasive Intelligence and Computing, Intl Conf on Cloud and Big Data Computing, Intl Conf on Cyber Science and Technology Congress (DASC / PiCom / CBDCom / CyberSciTech), Falerna, Italy, 2022, pp. 1-5

Technologies include:

- Java 11+, Spring Boot, Oracle, Spring Cloud, Redis, DB2, MyBatis, Tomcat, IBM WebSphere, SQL, Gitlab, Maven, REST, IBM MQ, Apache Kafka.

Achievements include:

- Managed and detailed complex systems for enterprise-level projects.
- Led a team of 20+ members, with different roles and skill-set.

Senior Software Developer / Technical Leader   **01/2017 – 10/2021**
Xeffe S.r.l. (Turin)

Analysis, coordination, and development of Enterprise Solutions for the finance market.

- Use of Domain Driven Design and Enterprise Integration Patterns.
- Development and maintenance of projects for finance market.
- Development and maintenance of proprietary frameworks based on Apache Camel and Play Framework.

Technologies include:

- Java 8+, Scala, Javascript, Spring, SQL, Apache Camel, Play Framework, Oracle, H2, MyBatis, GitHub, Ansible, Maven, nginx, SOAP, REST, JQuery, BeanIO, Quartz.

Achievements include:

- High customer satisfaction in the design and implementation of customer-specific projects using proprietary frameworks.

Software Architect / Full Stack Developer   **06/2015 – 01/2017**
Audacia S.r.l. (Turin)

Coordination and development of an Intelligent Big Data Analysis system to extract significant information from heterogeneous data sources.

- Analysis and development of software solutions for insurance companies.
- Mantainance of Java applications for finance market.

Technologies include:

- Node.js, Google Cloud Platform, Javascript, ArangoDB, Java, SQL, AQL, Loopback, Express, AngularJS, Oracle, GitHub, GIT, Grunt, Bower, NPM, Bootstrap.

Achievements include:

- Implemented a draft solution for Intelligent Big Data Analysis using cutting-edge technologies.

Software Engineer / IT Manager   **11/2014 – 06/2015**
Creatiweb S.r.l. (Turin)

Fullstack development of a proprietary booking engine for campsites and villages.

Audrito, G., Bortoluzzi, D., Damiani, F., Scarso, G., Torta, G. "An Enhanced Exchange Operator for XC." In: Castellani, I., Tiezzi, F. (eds) Coordination Models and Languages. COORDINATION 2024. Lecture Notes in Computer Science, vol 14676. Springer, Cham

- Development of WebServices to integrate the booking engine with accounting and channel manager software.
- Implementation of new features of the booking engine application.
- Performance analysis and tuning of company databases.
- Manager of the server farm.

Technologies include:

- Java, SQL, Linux, Javascript, PHP, XSD, XML, CSS, HTML, SQL, Bash Script, Firebird DBMS, Tomcat, JQuery, XPath, XMLBeans, SOAP.

Achievements include:

- Served as the main point of contact for the IT department, supporting both internal and external clients.

Software Engineer / Developer   11/2011 – 11/2014
NaturalBooking S.r.l. (Turin)

Development of the back-end of Hospes, a booking engine used by a lot of campsites and villages in Italy.

- Development of SOAP WebServices to integrate the Booking Engine with accounting and channel manager software.
- IT administration of servers hosting the application.

Technologies include:

- Java, Firebird DBMS, Javascript, SQL, XML, CSS, HTML, Bash Script, Tomcat, SOAP.

Analyst / Developer   06/2011 – 11/2011
Prosa S.r.l. (Venice)

Implementation of server-side and client-side features of the EmotiVending system, a vending machine equipped with a touch multimedia interface.

- Analysis and development of the new VeBox system, a control center for vending machine controllers, in Java.
- Development of an application for testing hardware of vending machines.

Technologies include:

- C++, Ruby, Java, Linux, Tomcat, Java Swing, Restlet.