



Roberto Boselli

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WORK EXPERIENCE

23/12/2008 – CURRENT Milano, Italy

ASSISTANT PROFESSOR IN COMPUTER SCIENCE UNIVERSITY OF MILAN BICOCCA - DEPARTMENT OF STATISTICS AND QUANTITATIVE METHODS

Teaching (undergraduate, postgraduate), research

- Information Systems:
 - Business Intelligence (BI) and Big Data Analytics
 - Social Media Analysis
 - Artificial Intelligence
 - Web Information Systems
 - Knowledge Management Systems
- Semantic technologies:
 - Text Mining and Text Analytics
 - Semantic Web, Ontologies, Linked Data
 - Unstructured data management
- Service Science:
 - Service classification systems
 - Labour market services
 - e-Government services
 - Digital services

23/12/2008 – CURRENT Milano, Italy

RESEARCHER INTERUNIVERSITY RESEARCH CENTRE FOR PUBLIC SERVICES (CRISP)

Research activities in the area of labour market using Big Data analytics and NLP:

- Analysis and design of Business Intelligence Systems and Decision Support Systems (DSS) in public and private organisations for labour market data
- Analysis and use of Web Information Systems applied to public services
- Design and development of semantic techniques for text processing
- Applied NLP techniques to classify and label occupations and skills in ESCO, improving job-skills matching
- Study and creation of labour market training content on skills, occupations and self-assessment tools

01/10/2009 – 31/12/2009 Milano, Italy

COLLABORATOR AFOL (AGENCY FOR THE TRAINING, GUIDANCE AND WORK)

Evaluation of technical and economic offers in the tender for the provision of the technological platform: 'City of Trades - Archive of Professions'.

01/07/2006 – 01/12/2008 Milano, Italy

RESEARCH FELLOW UNIVERSITY OF MILAN BICOCCA - DEPARTMENT OF STATISTICS AND QUANTITATIVE METHODS

Scientific research:

- Development of classification models and ontologies in the context of the European research project SEEMP - Single European Employment Market-Place (IST-4-027347-STP)

Teaching in Computer Science

01/01/2007 – 31/12/2008 Milano, Italy

LECTURER CSL - CONSORZIO SCUOLE LAVORO (SCHOOL LABOUR CONSORTIUM)

Teaching in Computer Science

01/07/2006 – 31/12/2007 Milano, Italy

LECTURER UNIVERSITY OF MILAN BICOCCA - DEPARTMENT OF STATISTICS AND QUANTITATIVE METHODS

Teaching in Computer Science

01/06/2002 – 31/05/2006 Milano, Italy

RESEARCHER UNIVERSITY OF MILAN BICOCCA - DEPARTMENT OF INFORMATICS, SYSTEMS AND COMMUNICATION

Teaching in Computer Science

Research collaboration:

- Definition of ontologies for the project MAIS - Multichannel Adaptive Information Systems (FIRB Project);
- Creation and definition of content, ontologies and methodologies for their treatment within the European project MILK - Multimedia Interaction for Learning and Knowledge (IST Project 2001-33165)

01/01/2005 – 31/12/2005 Trento, Italy

RESEARCHER UNIVERSITY OF TRENTO - DEPARTMENT OF INFORMATION ENGINEERING AND COMPUTER SCIENCE EDUCATION

Research collaboration:

Study for the integration of ontologies and domain ontologies in organizational applications based on semantics in the context of the European project VIKEF - Virtual Information and Knowledge Environment Framework (IST-2002-507173)

● EDUCATION AND TRAINING

01/03/2003 – 31/05/2006 Milano, Italy

PHD IN QUALITY OF LIFE IN THE INFORMATION SOCIETY University of Milan Bicocca - Department of Sociology

Website www.unimib.it | **Level in EQF** EQF level 8

01/10/2001 – 30/06/2002 Milano, Italy

MASTER IN COMPUTER SCIENCE FOR HUMANISTS University of Milan Bicocca - Department of Informatics, Systems and Communication

Website www.unimib.it | **Level in EQF** EQF level 7

01/09/1991 – 18/06/2001 Milano, Italy

BACHELOR IN MODERN HUMANITIES University of Milan

Website www.unimi.it | **Level in EQF** EQF level 6

● LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	B2	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Digital Skills - Test Results

 Information and data literacy

ADVANCED Level 6 / 6

Results from [self-assessment](#) based on [The Digital Competence Framework 2.1](#)

My Digital Skills

Software

Data Science Platforms (RapidMiner and Weka) | Orange (Software) |  Machine Learning | Python Language - Basic knowledge

Office tools

Microsoft Office | Microsoft Word | E-learning e Videoconferencing tools | Google Docs | Microsoft Powerpoint | Organizational and planning skills | Microsoft Excel | Zoom | Google Drive

Social Media

Social Media

PROJECTS

01/11/2024 – 31/10/2026

Labour Market Information for VET (LMI4VET)

National Coordinator & Researcher in the International Erasmus+ project: Labour Market Information for VET (LMI4VET) (2024-1-ES01-KA220-VET-000251090). The project's goal is to equip social partners of the Vocational Education and Training (VET) ecosystem with guidelines and training on how to use Labour Market Information (LMI) in order to better plan their continuing training offer to people with fewer opportunities.

Main research and development activities:

- Mapping Labour Market Intelligence sources at the national level, identifying key indicators relevant to vocational education and workforce training.
- Developing LMI-based training materials to equip vocational education and training institutions and policy makers with the necessary skills to interpret and apply labour market data in curriculum development and skills forecasting.
- Designing a Labour Market Intelligence chatbot based on artificial intelligence that provides real-time and historical LMI data to support data-driven decision-making in vocational education and training.
- Analysing labour market trends and skills demand, using quantitative and qualitative research methodologies to assess employment dynamics, skills mismatches and sector-specific workforce needs.
- Facilitating stakeholder involvement by organising round tables, workshops and policy discussions between education providers, employers and policy makers to enhance the role of LMI in vocational training.
- Benchmarking vocational education and the integration of LMI in partner countries, identifying best practices and policy recommendations to improve skills intelligence in vocational education.
- Contributing to research publications and policy recommendations, ensuring the dissemination of project findings to VET institutions, policymakers, and labour market stakeholders.

Link www.lmi4vet.eu/

01/03/2022 – 31/05/2024

Innovating the use of Labour Market Intelligence within European Universities (LMI-EUniv)

National Coordinator & Researcher in the International Erasmus+ project: Innovating the use of Labour Market Intelligence within European Universities (LMI-EUniv) (2021-1-RO01-KA220- HED-000032249). The objective of the project is to understand how European Universities are using Labour Market Information and Labour Market Intelligence in the planning and delivery of their provision and how can this be improved.

Main research and development activities:

- Mapping essential Labour Market Intelligence sources at the national level, identifying key data points to enhance employability insights for higher education institutions.
- Examining through a questionnaire how universities in Europe are using LMI to match the education/courses and extracurricular elements they provide to the need of their local and regional labour markets.

- Developing Training Materials on LMI capabilities, equipping HEI stakeholders with the skills to interpret and utilise labour market data for career services and curriculum development.
- Leading the creation of a Training Course on how Universities use (or how they can use) Labour Market Intelligence for planning their activity.
- Designing an intelligent HUB (LMI-HUB) – a centralised digital platform aggregating diverse LMI sources tailored to HEIs., including an AI-based LMI chatbot.
- Creating a practical guide for HEIs on integrating LMI into strategic planning, academic programs, and employability initiatives.

Link www.lmi-euniv.eu

01/05/2021 – 30/04/2023

Acquiring crisis-proof skills through online learning (ACSOL)

National Coordinator & Researcher in International Erasmus+ project: "Acquiring crisis-proof skills through online learning" (ACSOL) (2020-1-ES01-KA226-VET-096242). The aim of the project is digital skills training, through online learning, for workers in two of the most vulnerable sectors during the COVID-19 pandemic: social/health care workers and professionals in the entertainment, arts and culture sectors.

Main research and development activities:

- Analysing the digital skills gaps among low-skilled workers in social care and the arts/culture sector, assessing the impact of the COVID-19 crisis on their employment prospects and career transitions.
- Designing sector-specific digital training approaches, integrating innovative online learning methodologies tailored to the social care and entertainment industries.
- Contributing to the development of an e-learning toolkit, designed to enhance digital literacy and industry-specific skills through targeted online training programs.
- Contributing to the creation of open educational resources, ensuring free and accessible digital skills training for low-skilled workers and micro-enterprises.
- Engaging with stakeholders, including VET providers, policymakers, and industry representatives, to ensure sustainable impact and knowledge transfer.
- Leading the implementation of ACSOL in Italy, ensuring the development and adaptation of digital learning solutions for the target workforce.
- Contributing to research publications and policy recommendations, supporting digital upskilling strategies for crisis resilience in labour markets.

Link <https://bcomm.ro/acsol/>

30/11/2020 – 31/12/2022

European mid-life skills review (EMLSR)

National Coordinator & Researcher in the International Erasmus+ project: European mid-life skills review (EMLSR) (2020-1-UK01-KA204-079009). The project aims to develop an innovative skills assessment model to support people with low levels of literacy, numeracy and digital skills, helping them to improve their employability.

Main research and development activities:

- Developing and implementing a mid-life skills assessment framework designed to help workers assess transferable skills and competences for career development.
- Contributing to the creation of new digital learning materials, specifically designed for social partners and adult learners, with a focus on professional development, career transitions and lifelong learning.
- Collaborating on the design and evaluation of the interactive online tool 'Value My Skills', an innovative platform to help workers identify, assess and improve their professional and personal skills.
- Designing and implementing the Occupation Profiling Tool, an innovative functionality allowing the matching between the skills and competences identified using the platform and link these to potential occupations, using the EU Classification system ESCO.
- Leading engagement with national stakeholders, including trade unions, VET providers and policy makers, to promote the adoption of mid-life skills assessment strategies in Italy.
- Coordinating the translation and adaptation of project materials, ensuring accessibility and relevance for local audiences.
- Contributing to research on adult learning, skills recognition and workforce development, highlighting policy recommendations and practical applications for lifelong learning initiatives.

Link www.unionlearn.org.uk/european-mid-life-skills-review-project

01/11/2019 – 31/03/2021

Coordinated higher institutions responses to digitalization (Escalate)

Researcher in the International Erasmus+ project: Coordinated higher institutions responses to digitalization (Escalate) (2019-1-RO01-KA203-063214). The aim of the project is to assist universities in implementing activities aimed at

increasing digital skills levels for employability, upskilling, and matching to the needs and opportunities offered by the labour market and linked to job profiles.

Main research and development activities:

- Exploring digital education disruption, assessing the role of online learning and digital technologies in reshaping higher education and workforce training.
- Contributing to the production of the Compendium, the collection of all the best practices that the project partners have found to explore the issue of how higher education institutions have responded to digitisation.
- Designing and developing Training Course materials, integrating digital tools and methodologies to support skill development and lifelong learning in Higher Education Institutions.
- Developing an evidence-based Skills Escalator for Lombardy (Italy), analysing skill progression pathways in the context of digital transformation.

Link <https://escalate.projects.uvt.ro/>

09/01/2015 – 31/05/2016

Real-time labour market information on skill requirements: feasibility study and working prototype

"Real-time labour market information on skill requirements: feasibility study and working prototype", CEDEFOP (European Centre for the Development of Vocational Training, AO-RPA-VKVET-NSOFRO-Real-time LMI-010-14)

Main activities: definition and use of supervised and unsupervised techniques to classify information about job market-place extracted from web job vacancies; design of the prototype data model.

01/01/2015 – 31/12/2015

Observatory on the diffusion and interactivity of online services of local municipalities

"Observatory on the diffusion and interactivity of online services of local municipalities" for ANCI (National Association of Italian Municipalities).

Main activities: analysis through Text Mining and Social Media Analytics of the diffusion of social media, open data, and interactivity level of Lombardy municipalities' online portals.

01/04/2013 – 31/05/2014

ITLab v2

"ITLab v2, research laboratory for the study, development and use of technological prototypes to be applied to the service sector".

Main activities: definition, creation and publication of ontologies and Linked Data about public service domain starting from open datasets of the Lombardy Region.

● **DRIVING LICENCE**

Driving Licence: B

● **PUBLICATIONS**

2025

[eXplainable AI for Word Embeddings: A Survey](#)

Boselli, R., D'Amico, S., Nobani, N. (2025). eXplainable AI for Word Embeddings: A Survey. COGNITIVE COMPUTATION, 17(1) [10.1007/s12559-024-10373-2].

2024

[Innovating the use of labour market intelligence within european universities](#)

Atin, E., Boselli, R., Clément, F., Hauret, L., Krusell, S., Martin, L., et al. (2024). Innovating the Use of Labour Market Intelligence Within European Universities. EUROPEAN REVIEW OF APPLIED SOCIOLOGY, 17(28), 57-65

2023

[Midlife in a Changing and Post-Pandemic World. Implications for Career Education and Older Adult Learning Using On-Line and in Person Solutions](#)

Boselli, R., et al. (2023). Midlife in a Changing and Post-Pandemic World. Implications for Career Education and Older Adult Learning Using On-Line and in Person Solutions. EUROPEAN REVIEW OF APPLIED SOCIOLOGY, 16(26), 34-43

2022

[AI-implemented toolkit to assist users with career "configuration": The case of Create Your Own Future](#)

Grosso, C., Sazen, N., Boselli, R. (2022). AI-implemented toolkit to assist users with career "configuration": The case of Create Your Own Future. In Proceedings of the 26th ACM International Systems and Software Product Line Conference (pp.158-165)

2022

Fostering Transition to Industry 5.0 for Handcraft Fashion SMEs: the Case of Future Fashion Made to Order Suite

Grosso, C., Boselli, R. (2022). Fostering Transition to Industry 5.0 for Handcraft Fashion SMEs: the Case of Future Fashion Made to Order Suite. In Proc. of the 10th Intern. Conf. on Mass Customization and Personalization, MCP-CE 2022 (pp.61-68).

2018

WoLMIS: a labor market intelligence system for classifying web job vacancies

Boselli, R., Cesarini, M., Marrara, S., Mercorio, F., Mezzanzanica, M., Pasi, G., et al. (2018). WoLMIS: a labor market intelligence system for classifying web job vacancies. JOURNAL OF INTELLIGENT INFORMATION SYSTEMS, 51(3), 477-502

2018

Classifying online Job Advertisements through Machine Learning

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2018). Classifying online Job Advertisements through Machine Learning. FUTURE GENERATION COMPUTER SYSTEMS, 86, 319-328

2017

A pipeline for multimedia Twitter analysis through graph databases: Preliminary results

Boselli, R. et al. (2017). A pipeline for multimedia Twitter analysis through graph databases: Preliminary results. In DATA 2017 - Proceedings of the 6th International Conference on Data Science, Technology and Applications (pp.343-349).

2017

An AI Planning System for Data Cleaning

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2017). An AI Planning System for Data Cleaning. In Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2017, Proceedings, Part III (pp. 349-353)

2017

Using Machine Learning for Labour Market Intelligence

oselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2017). Using Machine Learning for Labour Market Intelligence. In Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2017 (pp.330-342)

2017

Labour market intelligence for supporting decision making

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2017). Labour market intelligence for supporting decision making. In 25th Italian Symposium on Advanced Database Systems, SEBD 2017 (pp.74-81)

2016

L'offerta di servizi on line nei Comuni lombardi e l'interattività sui portali istituzionali

Beltrami, G., Boselli, R., Cavenago, D., Martini, M. (2016). L'offerta di servizi on line nei Comuni lombardi e l'interattività sui portali istituzionali. RU. RISORSE UMANE NELLA PUBBLICA AMMINISTRAZIONE, 3.

2015

Simulation studies of structural equation models with covariates in a redundancy analysis framework

Lovaglio, P., Boselli, R. (2015). Simulation studies of structural equation models with covariates in a redundancy analysis framework. QUALITY & QUANTITY, 49(3), 881-890

2015

A model-based evaluation of data quality activities in KDD

Mezzanzanica, M., Boselli, R., Cesarini, M., Mercorio, F. (2015). A model-based evaluation of data quality activities in KDD. INFORMATION PROCESSING & MANAGEMENT, 51(2), 144-166

2015

Applying the AHP to smart mobility services: A case study

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2015). Applying the AHP to smart mobility services: A case study. In Proceedings of 4th International Conference on Data Management Technologies and Applications, (pp. 354-361)

2015

Accurate data cleansing through model checking and machine learning techniques

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2015). Accurate data cleansing through model checking and machine learning techniques. Third International Conference, DATA 2014 (pp. 62-80)

2015

Challenge: Processing web texts for classifying job offers

Amato, F. et al. (2015). Challenge: Processing web texts for classifying job offers. In Proceedings of the 2015 IEEE 9th International Conference on Semantic Computing, IEEE ICSC 2015 (pp.460-463).

2015

A model-based approach for developing data cleansing solutions

Mezzanzanica, M., Boselli, R., Cesarini, M., Mercorio, F. (2015). A model-based approach for developing data cleansing solutions. ACM JOURNAL OF DATA AND INFORMATION QUALITY, 5(4), 13-28

2015

Classification of web job advertisements: A case study

Amato, F., Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M., Moscato, V., et al. (2015). Classification of web job advertisements: A case study. In In Proceedings SEBD 2015 (pp.144-151)

2014

Improving Data Cleansing Accuracy: A model-based Approach

Mezzanzanica, M., Boselli, R., Cesarini, M., Mercorio, F. (2014). Improving Data Cleansing Accuracy: A model-based Approach. In Proceedings of the 3rd International Conference on Data Technologies and Applications (DATA) (pp. 189-201)

2014

How the Social Media Contributes to the Recruitment Process?

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2014). How the Social Media Contributes to the Recruitment Process?. In Proceedings of the European Conference on Social Media

2014

A Policy-Based Cleansing and Integration Framework for Labour and Healthcare Data

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2014). A Policy-Based Cleansing and Integration Framework for Labour and Healthcare Data. (pp. 141-168).

2014

Towards data cleansing via planning

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2014). Towards data cleansing via planning. INTELLIGENZA ARTIFICIALE, 8(1), 57-69

2014

Longitudinal data consistency verification using formal methods

Boselli, R., Cesarini, M., Mercorio, F., Mezzanzanica, M. (2014). Longitudinal data consistency verification using formal methods. INTERNATIONAL JOURNAL OF INFORMATION QUALITY, 3(3), 185-206

● **HONOURS AND AWARDS**

31/08/2014

DATA 2014 Best Paper Award – 3rd International Conference on Data Management Technologies and Applications - DATA

03/07/2013

HCI-KDD 2013 Best Paper Award – 3rd International Workshop HCI-KDD
