

FRANCESCO DEL BUONO

delbuono.francesco@outlook.it

Modena, Italy | +39 3381262927 | www.linkedin.com/in/francescodbuono/

PROFILE

A dedicated AI enthusiast with a deep passion for integrating machine learning solutions into real-world applications. As the Co-Founder and CTO of Cristail, I led pioneering research and AI-driven stock market strategies, with a solid foundation built on rigorous academic research during my PhD in ICT. I thrive on continuous learning, relishing challenges in the dynamic tech landscape, and fostering collaborative ties for innovative outcomes.

PROFESSIONAL EXPERIENCE

CO-FOUNDER & CTO

SEPT 2021 - PRESENT

CRISTAIL, ITALY

- Spearheaded the development of AI and ML models to craft optimized stock market investment portfolios, driving market outperformance.
- Pioneered research into emerging technologies, continuously refining and enhancing AI models to ensure cutting-edge portfolio strategies.
- Oversaw the design and deployment of the technology infrastructure, collaborating with vendors for the web application development.
- Fostered collaboration with academic institutions, leveraging Cristail's relationship with the University of Modena and Reggio Emilia.

PHD CANDIDATE IN ICT

NOV 2020 - PRESENT

UNIVERSITY OF MODENA AND REGGIO EMILIA, ITALY

- Published papers in international journals and conferences, with primary contributions in the areas of machine learning for entity matching and time series analysis by collaborating with various institutions.
- Leveraging advanced data analysis techniques to optimize business processes, including sales pattern analysis and forecasting.

RESEARCH FELLOW

NOV 2019 - NOV 2020

UNIVERSITY OF MODENA AND REGGIO EMILIA, ITALY

- Employing Machine Learning and Data Mining to innovate industrial machinery diagnostics and prognostics.
- Contributed to the SBDIO I4.0 project, supporting industries in their digital transition.
- Publish research findings in the domains of system health monitoring and predictive maintenance, highlighting advancements in novelty detection and comparisons between machine learning and deep learning methodologies.

RESEARCH INTERN

MARCH 2019 - SEPT 2019

HUAWEI TECHNOLOGIES, MUNICH RESEARCH CENTER, GERMANY

- Developing and evaluating of advanced Machine Learning and Deep Learning techniques tailored for anomaly detection and root cause analysis in Huawei's Cloud Infrastructure (AIOps).
- Pioneered an innovative approach for Huawei's SRE cloud maintenance teams, leveraging application logs and behavioral analysis to effectively detect anomalies

EDUCATION

MASTER'S DEGREE IN COMPUTER ENGINEERING
UNIVERSITY OF MODENA AND REGGIO EMILIA, ITALY

SEPT 2017 - OCT 2019

- Specialized in AI Applications, encompassing Big Data Management, Computer Vision, Deep Learning, and Cybersecurity.
- GPA **29.54** / 30 | Final Mark **110 cum laude** / 110

BACHELOR'S DEGREE IN COMPUTER ENGINEERING
UNIVERSITY OF MODENA AND REGGIO EMILIA, ITALY

SEPT 2014 - OCT 2017

- GPA **29.52** / 30 | Final Mark **110 cum laude** / 110

SCIENTIFIC HIGH SCHOOL DIPLOMA
SCIENTIFIC HIGH SCHOOL "MANFREDO FANTI", CARPI, ITALY

SEPT 2009 - JUN 2014

- Final Mark **100** / 100

KEY COMPETENCIES

- **Programming Languages:** Python, C++, JavaScript, HTML5, CSS
- **Data Analysis:** Pandas, Scikit-learn, PyTorch, Keras, Spacy, Plotly
- **Database:** SQL Server, MySQL, NoSQL (MongoDB, Neo4j)
- **Web Framework:** Django, Flask, React
- Motivated, passionate, and curious
- Strong communication and presentation skills
- Organized and detail-oriented

TEACHING EXPERIENCE

- "Big Data & Analytics" for IFOA | 2020, 2021, 2022, 2023 | ~120 total hours.
- "Data Science" for Nuova Didactica | 2022 | ~22 hours.
- "Data Analysis with Python" for CFI | 2020, 2021 | ~20 total hours.

AWARDS & HONORS

- **Selected Participant:** The Cornell, Maryland, Max Planck Pre-doctoral Research School, 2020
- **Best Master Thesis Award:** Fondazione Cassa di Risparmio di Carpi, 2019
- **Degree Awards:**
 - University of Modena and Reggio Emilia, 2018/2019
 - University of Modena and Reggio Emilia, 2016/2017
 - Fondazione Cassa di Risparmio di Carpi, 2016/2017
- **Study Awards:** University of Modena and Reggio Emilia, 2014-2018 (Consecutive Years)

SELECTED PAPERS

- Bonifati, A., Del Buono, F., Guerra, F., & Tiano, D. 2022. *Time2Feat: learning interpretable representations for multivariate time series clustering*. Proceedings of the VLDB Endowment, 16, 2, VLDB '23.
- Del Buono, F., Calabrese, F., Baraldi, A., Paganelli, M., & Guerra, F. 2022. *Novelty detection with autoencoders for system health monitoring in industrial environments*. Applied Sciences, 12, 210.
- Paganelli, M., Del Buono, F., Baraldi, A., & Guerra, F. 2022. *Analyzing how BERT performs entity matching*. Proceedings of the VLDB Endowment, 15, 8, VLDB '22.
- Paganelli, M., Del Buono, F., Marco, P., Guerra, F., & Vincini, M. 2021. *Automated machine learning for entity matching tasks*. 24th International Conference on Extending Database Technology, EDBT '21.
- Baraldi, A., Del Buono, F., Paganelli, M., & Guerra, F. 2021. *Using landmarks for explaining entity matching models*. 24th International Conference on Extending Database Technology, EDBT '21.
- Del Buono, F., Paganelli, M., Sottovia, P., Interlandi, M., & Guerra, F. 2021. *Transforming ML predictive pipelines into SQL with MASQ*. Proceedings of the 2021 International Conference on Management of Data, SIGMOD '21.