

TEO BUCCI

Applied Scientist · Research & Software Engineering

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🌐 teobucci

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📍 Dublin, Ireland

WORK EXPERIENCE

Applied Scientist (L4)

Amazon Web Services (AWS), Dublin, Ireland

🔧 Python Ruby AWS DevOps LLMs AI

📅 2024 - Present

- Drove **10k+ monitoring gap closures** end-to-end from research to production deployment across **34 global regions** and private regions, increasing reliability and leading to 30% more automation, saving **2 FTE headcount**.
- Developed group anomaly detection for real-time triaging of **200K+ daily signals**, deployed as layer-wise detection across all AWS network devices. Published in internal journal (**400+ engineers, 30+ scientists**) and drove adoption through 4+ cross-org presentations to senior/principal engineers (L6-L8).
- Led a large-scale business rules code migration using LLMs, **reducing time to release by 2.5 years (83%)** and enabling next-generation reactive software to meet AWS customer demand.
- Optimized 10-year-old codebases with 500+ contributors across 30 teams for agentic AI use cases.
- Improved team velocity by **17%** as **scrum master** for 13-person team, unblocking teammates and driving at-risk task recovery.
- Mentored **4 new joiners** to successful internship and probation period completion.
- As sole scientist, led **AI coding training** (50-person org), boosting adoption by **+60%** and interactions by **+102**.
- Region build automation (**120 hour saving**), **1.5 month** cumulative 24/7 on-call on Tier-1 services, unblocked **30+** CI/CD pipelines.

EDUCATION

BSc & MSc in Mathematical Engineering - Statistics, Machine Learning and AI

Polytechnic University of Milan

📅 BSc: 108/110, MSc: 110/110 with Honors

📅 2018 - 2024

- Selected as one of the **top 1%** students for **Alta Scuola Politecnica** merit-based honour program (XVIII Cycle).
- **Thesis**: "Impact-Based Drought Detection via Interpretable ML and Causal Discovery". *JGR: Machine Learning and Computation*.
- Designed and released on PyPI a Python library (`tefs`) from scratch, with CI/CD and unit-testing (**100 downloads/month**).

LEADERSHIP & PROJECTS

Vice President, Mathematical Engineers Students Club

2023 - 2024

🔧 Leadership Team Building Teaching Python NLP

🔗 aim-mate.it

- Co-led a 9-person team, growing membership by **325 associates** (+14%) and organizing **20+ events** including courses, mentoring, and company collaborations.
- Elected with **record-breaking vote count**.
- Lectured in-person university courses: introductory Python to **100+** students and NLP to **150+** students.

Real-time Detection of the "Signal for Help" using Surveillance Cameras

2023 - 2024

🔧 Python Mediapipe Deep Learning Numpy Real-time inference Scikit-learn

🔗 S2CITIES-AI

- Engineered a **real-time prediction** hand gesture detection system (sub 10 milliseconds), delivering at **4% of the €5K budget**.
- Enabled real-time inference on lightweight hardware by reducing features by **92%** via Mediapipe, while improving accuracy by **+17.4%**.
- Led a team of 7 across Japan, USA, and Italy, mastering coordination across three time zones.

Predicting hospital re-admission 6 months after a Heart Failure

2023

🔧 Python Random Forests Logistic Regression

🔗 teobucci/slhd

- Developed a 6-month prediction model with **+5.7% AUC** with respect to state-of-the-art.
- Conducted in-depth analysis to determine the most important features, providing valuable insights for therapy optimization.

LANGUAGES & INTERESTS

Languages: Italian (native), English (fluent)

Side Projects: Educational YouTube channel with **40K+ subscribers**, **4.1M+ views**, and **\$5K+ revenue** (2013 - 2018)

Passions: Athletics (long and triple jump, 5+ years), photography and video making (8+ years), cooking