

TEO BUCCI

Applied Scientist · Research & Software Engineering

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WORK EXPERIENCE

Applied Scientist

Amazon Web Services (AWS), Dublin, Ireland

🔗 Python Ruby Athena DynamoDB S3 Lambda SageMaker LLMs AI

📅 Apr. 2024 - Present

- Improving AWS Network availability and reliability through impact reduction and auto-remediation, bridging research and engineering.
- Developed and deployed a group **anomaly detection** system from scratch to AWS production for **real-time** event triaging. Published results as a **paper** in the internal Networking journal.
- Presented research findings to senior leadership including Principals across 4+ technical presentations and customer-facing meetings.
- Closed **10k+ monitoring gaps** in networking events from proof of concept to production deployment across **34 global regions** and private regions (GovCloud, China, ESC).
- Led large-scale business rules code migration using LLMs, reducing timeline from **3 years to 6 months** 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.
- Served as **Scrum Master** for 13-person team, leading ceremonies, sprints, and task completion while mentoring new joiners.
- As sole scientist in 50-person organization, led **AI coding training sessions** covering foundational theory and hands-on implementation.
- Contributed to engineering tasks: features, region build automation, Tier-1 services 24/7 on-call, CI/CD pipelines, and code reviews.

EDUCATION

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

Polytechnic University of Milan

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

📅 Sep. 2018 - Apr. 2024

- Selected as one of the **top 1%** students for **Alta Scuola Politecnica** merit-based honour program (XVIII Cycle).
- Team leader of a group project (**€5K budget**) tackling violence against women.
- Thesis: causal discovery on spatio-temporal meteorological data. Python library `tefs` written from scratch and released on PyPI.

PROJECTS

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

🔗 Python Mediapipe Deep Learning Real-time inference Scikit-learn

🌐 S2CITIES/S2CITIES-AI

- Engineered a **real-time prediction** hand gesture detection system (sub 10 milliseconds).
- Improved a neural network accuracy by **+17.4%** by leveraging Mediapipe, exploiting only 10 features.
- Efficiently 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

🔗 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.

LEADERSHIP & TEACHING

Vice President

Mathematical Engineers Students Club, Milan, Italy

🔗 Leadership Team Building Teaching Python NLP

📅 Jun. 2023 - Apr. 2024

- 9-person team co-leader, steering a **2500+ member** Association to success.
- Record-breaking elected Board member with the **highest** number of votes.
- Organized and lectured an introductory Python course to **100+** students and a NLP course to **150+** students.

SKILLS & INTERESTS

Languages: Italian (native), English (fluent)

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

Projects: Created an educational YouTube channel, with 40K+ subscribers, 4.1M+ cumulative views, and **\$5K+ revenues**