Laurent **Callot**

l.callot@gmail.com | www.lcallot.github.io | lcallot | lcallot | Laurent Callot

Summary

Applied science leader with experience building and scaling teams to develop AI-driven automation tools. Led global teams of scientists and engineers delivering AI solutions for software development, cloud infrastructure, and enterprise automation. Skilled in the development of AI products, large-scale deployment, and bridging research with practical applications. Focused on AI-driven efficiency gains and real-world impact in software engineering and operations.

Work Experience

AWS AI
Seattle, USA - Berlin, Germany

Principal Applied Scientist and Senior Manager
Mar. 2020 - current

- Code agents science head for Amazon Q.
- Science lead for Amazon Software Builder Experience.
- Created and managed a team of 30+ scientists and engineers distributed on 4 continents.
- Key accomplishments:
  - 2024: Led the development of the Amazon Q Developer agent. Topped SWE-bench leaderboard 3 times (leaderboard link, blog 1, blog 2).
  - 2024: Developed AI agents to automate Java application migration at Amazon. Saved 4500 years of developer effort and $260M/year. (link)
  - 2023: Built Amazon's internal deployment safety system, monitoring 3 million deployments monthly.
  - 2023: Developed the Sagemaker Foundation Model Hub, making 10+ FM models 1-click available with parameter-efficient fine-tuning.
  - 2021: Launched the Anomaly detection service Amazon Lookout for Metrics.

Amazon - Intelligent Cloud Control
Berlin, Germany

Senior Applied Scientist
Jan. 2019 - Feb. 2020

- Science lead for the organization in charge of the health of Amazon's retail website.
- Key accomplishments:
  - 2020: Developed a new alarming system for Amazon's key metric, the order rate, detecting rare (10^{-6}) events with precision.
  - 2019: Developed a service resilience policy indicator and incentive scheme for all service owners at Amazon reviewed weekly at SVP-level.

Amazon - Supply Chain Optimization Technology
Berlin, Germany

Economist
Jun. 2016 - Jan. 2019

- Key accomplishments:
  - 2018: Developed and deployed the first neural structural model for long-range forecasting.
  - 2017: Built uncertainty quantification on the legacy forecasting system for retail ordering.

Danske Commodities
Aarhus, Denmark

Consultant
2013 - 2014

- Built ML forecasting models and trading strategies for the Nordic electricity spot market.

Free University Amsterdam
Amsterdam, the Netherlands

Postdoctoral Researcher - Econometrics and Machine Learning for time-series analysis.
2012 - 2015

- Research Fellow, the Tinbergen Institute. Junior Research Fellow, CREATES.

Skills

Management 5+ years of management of over 30 scientists and engineers. Over 150 interviews and 30 hires. Underperformance management
Research 20+ publications on generative AI, deep-learning, time-series, causality, statistics, econometrics with >1.5k citations.
Patents 4 patents granted, 12 filed with USPO.
Languages English (fluent), French (fluent), Danish (proficient)

Education

Ph.D. in Econometrics
2007 - 2012

CREATES - Aarhus University
Aarhus, Denmark

- Visiting Scholar, Princeton University 2011.
- Dissertation focused on Time-series modeling, high-dimensional statistics, Machine Learning, and applications in macroeconomics.

B.Sc. in Mathematics and Computer Science
2007

Paris Sorbonne University - Université Pierre et Marie Curie
Paris, France

B.Sc. in Economics
2007

Paris Nanterre University
Paris, France