

Emanuele Rossi

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I'm an ML researcher combining **fundamental research** experience with real-world **product impact**. I'm the first author of [Scalable Inception Graph Network](#), now **used in production by AirBnB**, and [Temporal Graph Network](#), which has received over **750 Github stars**. At Twitter, I successfully developed multiple ML models for the "who-to-follow" recommendation feature, resulting in an increase of over **1.2M follow actions daily**. I am looking forward to driving innovation in a cutting-edge environment.

EDUCATION

Imperial College London, London — Ph.D. in Computer Science

OCTOBER 2020 - OCTOBER 2023 (EXPECTED)

My [research](#) focuses on bridging the gap between academic research and real-world applications of **Graph Neural Networks**. My work has been published at top conferences including ICML, ICLR, AAAI and RecSys. Supervised by Prof. Michael Bronstein.

University of Cambridge, Cambridge — Master in Advanced Computer Science

OCTOBER 2018 - JUNE 2019

Graduated with **Distinction (4.0 GPA)** with thesis: "Graph Deep Learning for ncRNA data" ([published](#) at KDD 2019 workshop on Graph Deep Learning), supervised by Prof. Pietro Liò.

Imperial College London, London — Bachelor in Computer Science

OCTOBER 2015 - JUNE 2018

Graduated with **First Class Honors (4.0 GPA)**.

SELECTED PUBLICATIONS (Full List [Here](#))

E. Rossi et al., "Temporal Graph Networks for Deep Learning on Dynamic Graphs", ICML 2020 GRL Workshop [[arXiv](#), [blog](#)]

A new model for **deep learning on dynamic graphs (>300 citations, >700 Github stars)**. Adopted by [memgraph](#) (graph analytics company) and used by GraphCore to [benchmark their hardware](#).

E. Rossi*, F. Frasca* et al., "SIGN: Scalable Inception Graph Neural Networks", ICML 2020 GRL Workshop [[arXiv](#), [blog](#)]

First graph deep learning model to scale to graphs with billions of edges (> 200 citations). Used in [production by Airbnb](#).

B Chamberlain, S. Shirobokov, **E. Rossi** et al., "Graph Neural Networks for Link Prediction with Subgraph Sketching", ICLR 2022, Oral (top 5%) [[arXiv](#)]

First GNN model to scale link prediction to graphs with millions of nodes thanks to sketching, a hashing technique which enables efficient computation of subgraph statistics.

E. Rossi et al., "On the Unreasonable Effectiveness of Feature propagation in Learning on Graphs with Missing Node Features", Learning on Graphs Conference 2022 [[arXiv](#), [blog](#)]

First model to enable scalable graph learning with partially missing node features.

WORK EXPERIENCE

Twitter, London — Machine Learning Engineer

JUNE 2019 - FEBRUARY 2023

Worked on **applied and fundamental research** around **graph neural networks**. Scaled these technologies to graphs with **tens of billions of edges**. Developed an embedding-based model to recommend users "who to follow", leading to an **increase of >1M follow actions per day** on the platform.

Python, Pytorch, BigQuery

Fabula AI, London — Machine Learning Engineer

MARCH 2019 - JUNE 2019

Researched and developed **novel graph deep learning models for fake news classification**. Fabula AI was acquired by Twitter in June 2019. *Python, TensorFlow*

Imperial College London, London — Research Intern

APRIL - SEPTEMBER 2018

Worked under the supervision of Prof. Michael Bronstein on **predicting tweet virality** using Graph Neural Networks. *Python, TensorFlow*

Google, California — Software Engineering Intern

JULY - OCTOBER 2017

Worked in the **Google Play Store infrastructure team**. *Java, ProtoBuf, BigQuery*

PROJECTS AND AWARDS

Talks and Blog Posts

I have written a series of blog posts on my research ([full list](#)) and have been invited to give over 10 talks ([full list](#)).

LeadTheFuture — Co-Founder

JUNE 2018 - MARCH 2023

[LeadTheFuture](#) is a **non-profit mentoring organization** and the **largest merit-based STEM community in Italy**. Today LeadTheFuture counts more than **200 mentors** (engineers, researchers, and entrepreneurs) and **500 selected mentees**. Our work has been featured in [Forbes](#).

Forbes 100 Under 30 Italy

SEPTEMBER 2020

In recognition of our work with LeadTheFuture, my co-founders and I have been included in the [Forbes 100 Under 30 Italy list](#) for the Education category.