

# Ben Finkelshtein

ben.finkelshtein@cs.ox.ac.uk • +44-7562-416-497 • [LinkedIn](#) • [Website](#) • [Google Scholar](#)

## Education

**University of Oxford** (Expected graduation April 2026) January 2023 - Present

**Doctor of Philosophy (PhD) in Computer Science** Oxford, United Kingdom

- Titled "Structure-based Learning in Deep Graph Networks"; how to utilize structure in Geometric Deep Learning
- Supervised by DeepMind Chair of AI Prof. Michael M. Bronstein and Dr. İsmail İlkan Ceylan
- Co-authored Towards Data Science's [Graph & Geometric ML in 2024](#) and [Cooperative Graph Neural Networks](#)
- Awarded the **Clarendon Scholarship of over £200,000** towards tuition fees and living costs ( < **1% acceptance**)

**Technion - Israel Institute of Technology** November 2019 - June 2022

**Master of Science in Computer Science** Haifa, Israel

- Supervised by Prof. Alexander Bronstein and Prof. Chaim Baskin
- **GPA: 99.1; Graduated with highest honors (summa cum lauda, top 1%)**

**Technion - Israel Institute of Technology** November 2013 - July 2017

**Bachelor of Science in Electrical Engineering and Bachelor of Science in Physics** Haifa, Israel

- Completed two separate B.Sc as a Fellow in the IDF's competitive Psagot program ( < **1% acceptance**)
- **GPA: 92.1; Graduated with great honors (magna cum lauda, top 3%)**

## Selected Publications

First author of [Equivariance Everywhere All At Once: A Recipe for Graph Foundation Models](#) Under review  
We derive the first graph foundation model that is provably universal and achieves SOTA zero-shot performance

Co-First author of [Position: Graph Learning Will Lose Relevance Due To Poor Benchmarks](#) ICML 2025  
We call for a paradigm shift toward meaningful benchmarks, rigorous evaluation, & more domain expert involvement

First author of [Learning on Large Graphs using Intersecting Communities](#) NeurIPS 2024  
A fundamentally different pipeline for learning on very large non-sparse graphs using intersecting communities

First author of [Cooperative Graph Neural Networks](#) ICML 2024  
A new graph signal processing paradigm in which each node can choose a different communication strategy

Co-first author of [Strategic Classification with Graphs Neural Networks](#) ICLR 2023  
Learning in a setting where users that are dependant can modify their features to obtain favorable predictions

## Professional Experience

**Microsoft Research; Student Researcher** June 2025 - October 2025  
**Researching LLMs/Agents capabilities** at the Language Learning team with Ryen White and Silviu Cucerzan.

**eBay; Applied Researcher** June 2022 – January 2023

- **Engineered LLMs** to match queries with the most relevant landing pages for search engine optimization
- Developed a keyword extraction technique, combined it with **GPT3**, and **subsequently fine-tuned the process**
- Achieved a 30% increase in landing page click-through rates (CTR) within the first three months of implementation

**SKF Group - AI Center of Excellence; Data Scientist** August 2020 – May 2021

- Designed, customized, and implemented end-to-end machine learning pipelines, from ideation to production
- Led research in event prediction, **anomaly detection, and time series forecasting** to aid machinery fault diagnosis
- Designed an event-based evaluation metric that improved the company's anomaly detection from 78% to 90%

**Rafael Advanced Defense Systems; Algorithm Developer** October 2017 – July 2020

- Specialized military service assignment (**1 recruit per year**)
- **Created a neural network which predicts  $n$ -body problem solutions** for classified company use
- Engineered generative models to predict molecular dynamics pathways, utilizing physical simulations
- Created new **generative models to analyze stable & transient protein folding conformations**

## Awards

---

G-Research Grant - £2000	September 2024
Graduated Top 1% from a Master of Science in Computer Science - £500	July 2023
Clarendon Scholarship - over £200,000	July 2022
M.Sc Study Scholarship - over £45,000	December 2019
Graduated Top 3% from a Bachelors of Science in Electrical - £100	July 2018
Graduated Top 3% from a Bachelors of Science in Physics - £100	July 2018

## Selected Talks

---

Institute of Science and Technology <b>Austria</b> ; Graph & Geometric ML in 2024	November 2024
Technion - <b>Israel</b> Institute of Technology, <b>CS department</b> ; Graph & Geometric ML in 2024	September 2024
Technion - <b>Israel</b> Institute of Technology, <b>ECE department</b> ; Cooperative Graph Neural Networks	September 2024
RWTH <b>Aachen</b> University; Cooperative Graph Neural Networks	July 2024
Learning On Graphs, <b>Oxford</b> ; Cooperative Graph Neural Networks	December 2023
University of <b>Oxford</b> ; Graph Neural Networks meet Reinforcement Learning	June 2023
Technion - <b>Israel</b> Institute of Technology; Simple & Universal Rotation Equivariant Point-cloud NNs	January 2022
SKF Group - AI Center of Excellence; An Introduction to Geometric Deep Learning	April 2021
KDD Conference - Deep Learning on Graphs Workshop; Single-Node Attack for Fooling GNNs	August 2021

## Teaching Experience

---

**University of Oxford; Head Teaching Assistant** January 2023 – Present

- Served as head TA for the **Geometric Deep Learning and Graph Representation Learning** courses
- Created the coding assignments for the different classes
- Guided 30 graduate students through coursework, while in charge of 100 students
- Led 10 teaching assistants, coordinating effective tutorial sessions, and timely support for students

**Blue Education; Private Tutor** July 2023 – Present

Taught Math, Physics and Computer Science for A-Levels, SAT, and college exams as an online part time tutor

**Technion - Israel Institute of Technology; Head Teaching Assistant** March 2021 – June 2022

- Created all of the [tutorials and code notebooks](#)
- **Conducted hybrid online and classroom lectures** and practice sessions for the Geometric Deep Learning course
- Supervised 40 graduate and undergraduate students including final course projects

**Matematix - High-School and College Exam Preparation Center; Teacher** July 2012 – November 2013

- Led sessions of thirty students twice a week
- **Taught Mathematics, Physics, English and Coding for matriculation, SAT, and college exams**

## Technologies, Languages and Interests

---

**Technologies:** C#, C++, Python (Pandas, Numpy, Pytorch, Cuda, Pytorch geometric, Scikit-Learn), Matlab, SQL, Bash, Scala, LaTeX, Ubuntu, Git/version control, AWS, VMs, GNU/linux

**Languages:** English (Fluent), Hebrew (Native) and Russian (Basic)

**Interests:** Geometric Deep Learning, Large Language Models, Generative Models and Machine Learning Theory; Bachata dancer and instructor, Billiards and Powerlifting