

# Tedi Yankov

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## EDUCATION

### University of Oxford

Oxford, UK

*Doctor of Philosophy, AI for the Environment*

*Oct. 2025 – Present*

- Fully-funded and stipended by the Intelligent Earth - UKRI AI CDT in AI for the Environment Scholarship.
- Courses in Python, advanced deep learning and computer vision, time series and signal processing, environmental data analysis, climate physics, remote sensing technologies, environmental sciences, statistical inference and software engineering.
- Supervised by **Prof. Andrew Zisserman** (Department of Engineering) and **Dr Cait Newport** (Department of Biology)
- Developing and applying **computer vision methods** for **marine ecology and conservation**.

### University of Oxford

Oxford, UK

*Master of Science, Social Data Science*

*Oct. 2023 – Aug 2024*

- Courses in Python, analytical statistics, machine learning, network science, data analytics at scale, fairness and AI ethnics
- Thesis **developing a novel NLP algorithm** for computational narrative extraction from unstructured text data using an ensemble of LLMs and signed Leiden community detection (outperformed existing CNE models on accuracy & recall tasks).

### University College London (UCL)

London, UK

*Bachelor of Science, Politics and International Relations with Data Science (1:1)*

*Sept. 2020 – May 2023*

- Courses in R, causal/statistical inference, measurement, quant. data analysis, migration, democracy, public policy, ethics.
- Dissertation exploring the predictive capacity of the **gravity model** in forecasting transnational migration flows (strong correlations (up to 0.9) between actual and predicted flows, statistically significant at all conventional levels.)

### Certification Courses

Remote

*Various Certified Providers*

- YOUNGO Nature Working Group: Biodiversity Academy, Oxford School of Climate Change, Climate Science for Everyone (Duke), Climate Data Analysis with Python (UK Centre for Hydrology and Ecology)

## EXPERIENCE

### Data Scientist

ML/AI

Sustainability

Research

Product Dev.

June 2022 – Present

*World Data Lab*

*Remote*

- Full-cycle contributor to data products **measuring** and **modelling** climate change, biodiversity, spending and demography.
- **Curating** and **transforming** data into **digestible, decision-driving insights** for public (e.g. IOM, GIZ, Internet Society) and private (e.g. Mastercard, L'Oreal, Colgate) sector stakeholders on topics of sustainable development.
- **Secured a 100K EUR grant** to build an algorithm for scope 1-3 **emissions efficiency optimisation** of private sector supply chains in collaboration with Estée Lauder.
- Led the **COP27 launch campaign** of the **World Emissions Clock**, presenting the cutting-edge climate monitoring tool to non-data science audiences and senior stakeholders.
- **Skills:** R, Python, data curation, analysis, modelling and visualisation, evaluation design, data product development.

### Graduate Researcher

ML/AI

Research

July 2024 – Present

*Oxford Internet Institute*

*Oxford, UK*

- Lead author on ongoing research collaboration building a **novel benchmark** for NLP algorithms using **synthetic ground-truth** via LLM-generated articles simulating discourse in the UK migration debate.
- Constructed efficient **web-scrapers** to curate unstructured news article data beyond what available API tools could access.
- **Designing** the generative and evaluation architecture of the benchmark, involving **responsible fine-tuning** and **prompt engineering** of GPT-4, Mistral and Llama models through **ICL** to **mitigate risks** of unsafe and insensitive LLM output.
- Conducting **extensive model evaluation**, probing for **discriminability, human mimicry and hallucinations**.
- **Skills:** Python, data curation and refinement, NLP, LLMs (fine-tuning, prompt-engineering, ICL), evaluation design.

### Research Assistant

Research

Policy

May. 2021 – Sept 2023

*UCL Department of Political Science*

*London, UK*

- Assisted Dr Samer Anabtawi, researching LGBTQ+ activism in the MENA region (working with **sensitive qual. data**).
- Worked on various projects engaging with **refugee experiences in unsafe settings** (e.g. Moria and Cox's Bazar refugee camps), **handling sensitive data** pertaining to testimonies, prioritising **safe research practices**.
- **Skills:** research ethics, data collection and processing, policy research, literature review.

### Summer Intern - Data Research

Research

Policy

Jul 2021 – Sept 2021

*Institute for Market Economics*

*Sofia, Bulgaria*

- Synthesised reform plans submitted to the European Commission, led **refinement** of government & tax database for the assembly of regional profiles, used statistical software to filter and analyse **large-N EU funding data**.
- **Skills:** database curation and refinement, cross-functional teamwork and communication, handling private data.

## FELLOWSHIPS, AWARDS AND LEADERSHIP

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- Global Shaper** Sustainability Leadership Sept 2022 – Present  
*World Economic Forum* London, UK
- Selected to join the WEF Global Shapers community in recognition of demonstrated leadership and social impact.
  - As the current Vice Curator and incoming Impact Officer, I have led projects across the themes of sustainability, AI and digital skills.
- Millennium Fellow** Sustainability Leadership Apr 2021 – Nov 2021  
*United Nations Academic Impact* London, UK
- Chosen for competitive (6% acceptance rate) fellowship from 25,500+ students.
  - Founded the Connected Scholars Program - a 7-week speaker series empowering youth action towards the UN SDGs.
- Secretary & Welfare Officer** Policy Leadership Apr 2022 – May 2023  
*UCL United Nations Association (UCLUNA)* London, UK
- Organised highly successful event series, bringing together UCL societies and students with internationally renowned speakers across the UN and world governments for DEI workshops in the international governance space.
  - Organising large scale Model United Nations conferences tackling the issue of minority empowerment, working with UNHCR & recognised by the UN Secretary General's Youth Envoy and the Secretary-General of the IOM.

### Awards

- Dean's List for Outstanding Academic Achievement (UCL)
- Winner and Team Leader - *Microsoft AI for Good Hackathon*
- Wings of Hope Achievement Award* - awarded for promoting education for disadvantaged children in India & Malawi. Presented at the House of Lords on my work and the UN SDGs.
- Owlypia TIC Challenge in Technology* (Gold)
- UKMT Maths Competition* (Gold and Silver)

## PUBLISHED WORK AND CONTRIBUTIONS

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**Oral Presentation** Yankov, T., Schuetze, S., Yeung, J., Dong, X. (2026) **TM-GNN: a Factorised Temporal Multiplex Graph Neural Network for Dynamic Link Prediction**. Accepted at the *Oxbridge Woman in Computer Science* conference hosted by the *Mathematical Institute at the University of Oxford*.

**Oral Presentation** Yankov, T., Scarcerieau, S., Sibdari, S. (2026) **Constructing and Mobilising an Emissions Efficiency Index for a Multi-Modal Shipping Network**. Accepted at the *INFORMS Transportation Science and Logistics Conference* conference hosted by *MIT Sloan*.

**Oral Presentation** Yeung, J., Schuetze, S., Yankov, T. (2024) **Parallel Network Change: An Analysis of Network Co-Evolution with Temporal Graph Distances and Latent Space Modelling**. Accepted at the *Networks and Time II* conference hosted by the *Network Science Institute at Northeastern University*.

**Published** Kharas, H., Fengler, W., Sheoraj, R., Vashold, L., Yankov, T., **Tracking Emissions by Country and Sector**. Brookings Institution.

**Published** Caballero Reina, J., Crespo Cuaresma, J., Fenz, K., Zellman, J., Yankov, T., Taha, A. **Gravity Models for Global Migration Flows: A Predictive Evaluation**. *Popul Res Policy Rev* 43, 29

**Published** Yankov, T. (2022) **The Digital Gap Strikes Again: Exploring the Effect of Internet Poverty on Refugee Flight Patterns Through Regression Analysis**. *International Public Policy Review*. 16(1), pp. 61-78.

**Working Paper** Yankov, T., McNeill, R., Hale, S., Rocher, L., Mahdi, A. (2024) **MigNar : An AI-driven Synthetic Ground Truth Benchmark for Narrative Extraction Algorithms**.

## SKILLS

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**Human Languages:** English, Bulgarian, French, Spanish, German

**Computer Languages:** Python (proficient), R (proficient), SQL (basic), HTML (basic), CSS (basic)

**Technical Skills:** Full-cycle data manipulation (dataset curation, data analysis/visualisation, pipeline engineering), Machine Learning (multivar. linear/logit, regularised, tree-based and count regressions, neural networks), computer vision (2D/3D, CNNs, Vision Transformers) analytical statistics (hypothesis testing, causal inference), NLP (NER, topic modelling), SLMs/LLMs (fine-tuning, in-context learning, prompt engineering, APIs), network methods (community detection, temporal, multiplex and signed network analysis, network formation models, GNNs)

**Tools / Libraries:** TensorFlow, PyTorch, Numpy, Pandas, Transformers, NetworkX, Scikit-Learn, Matplotlib, tidyverse, data.table, GitHub, VS Code, R Studio, HuggingFace, Docker, GCP, L<sup>A</sup>T<sub>E</sub>X, Figma, Notion, WordPress, Google Suite

**Soft Skills:** presenting technical findings to non-technical stakeholders, cross-functional teamwork, time-management, leadership

**Hobbies:** painting, reading, bird-watching, swimming, skiing