

Nationality
French
Current home
Oxford, UK
Website
Personal [↗](#)

Edith Darin

Demography, Bayesian statistics and Geospatial data science

Contact

E-mail

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Tech repo
Github
edarin
OpenStreetMap
edithdarin

Programming

OS Preferences

Windows
GNU/Linux
Statistical Programming
R (+++)
Python (++)
Reporting
Microsoft Office
Latex
R Markdown
R Shiny

Languages

French native
English fluent
German intermediate
Italian intermediate

Education

- 2025 - **PhD in Demography** University of Oxford, UK
2022 Topic: *Estimating subnational population sizes in data-scarce contexts*. Affiliated with the Max Planck Institute for Demographic Research.
- 2019 - **MSc in Applied GIS and Remote Sensing** University of Southampton, UK
2018 Dissertation featured in a peer-reviewed article.
- 2018 - **MSc in Statistics and Economics**
2015 Paris Graduate School of Economics, Statistics and Finance (ENSAE), France
Semesters abroad at Humboldt University and Galatasaray University.
- 2014 - **Double Bachelor's Degree in Economics and Sociology**
2013 École Normale Supérieure de Cachan, Université Paris-I-Panthéon-Sorbonne, France

Working experiences

- 2026 - **Population Data Scientist** Demographic Unit, University of Oxford, UK
2024 Nowcast monthly population displacement in war-struck Ukraine. *Methods*: Curate an automatised geospatial data pipeline from web scrapping. Develop a dashboard, an API and a PostgreSQL database in Docker containers. Model monthly population stocks and flows from mobile phone data.
- 2024 - **Research Fellow** WorldPop, University of Southampton, UK
2018 *Until 08/21 Specialist Research Technician*
Building statistical models to provide up-to-date, spatially complete population count in data-scarce contexts. Predict and map population with high spatial resolution at the grid cell. Lead modeller for filling population gaps in censuses impacted by insecurity (Burkina Faso and Mali). Lead trainer on gridded population estimation to national statistics offices.
Methods: Hierarchical Bayesian modelling combining survey data with geospatial covariates. Random-forest models for producing high-resolution population estimates. Grid-based spatial sampling design for household surveys.
- 2017 **Data Scientist Intern** mVAM, UN World Food Program, Italy
Assessing food security from remote sensing and mobile data collection. Support mission for Mali Country Office. *Methods*: Machine-learning based propensity score weighting in complex survey design.
- 2016 **Data Scientist Intern** Etalab, Governmental Task Force for OpenData, France
OpenFisca: French tax and benefit system micro-simulation platform. Finalist of the Open Government Partnership Hackathon.

Grants

- 2021 **Mapping refugees with high spatial resolution** UNHCR: \$80 000
Co-I for developing methods to map refugees for survey purposes.
- 2022 **Statistical population modelling for census support** UNFPA: \$30 000
Co-I for creating a population model with Brazil Statistics Office (IBGE).

Academic outcomes

Peer-reviewed papers

- Tackling public health data gaps through Bayesian high-resolution population estimation: A case study of Kasai-Oriental, Democratic Republic of the Congo. Boo G, **Darin, E.**, Chamberlain HR, Hosner R, Akilimali PK, et al., *PLOS Global Public Health*, 5(9): e0005072, 2025 [↗](#)
- How Accurate Are High Resolution Settlement Maps at Predicting Population Counts in Data Scarce Settings? **Darin, E.**, Kashyap, R. and Leasure, D.R. *Population, Space and Place*, 31: e70083., 2025 [↗](#)
- Mapping refugee populations at high-resolution by unlocking humanitarian administrative data, **Darin, E.**; Dicko D. H.; Galal H.; Jimenez R.M.; Park H.; Tatem A.J.; Qader S., *Journal of International Humanitarian Action*, 2024 [↗](#)
- Building footprint data for countries in Africa: To what extent are existing data products comparable?, Chamberlain H. R.; **Darin, E.**; Adewole A. W.; Lazar A.; Tatem A.J., *Computers, Environment and Urban Systems*, 2024, 102104, [↗](#)
- The Population Seen from Space: When Satellite Images Come to the Rescue of the Census, **Darin, E.**; Kuépié M.; Bassinga H, Boo G., Tatem A.J.; *Population*, 2022, 77:3, [↗](#)
- High-resolution population estimation using household survey data and building footprints, Boo, G; **Darin, E.**; Leasure, D.R.; Dooley, C.A.; Chamberlain, H.R., et al, *Nature Communications*, 2022, 13:1, [↗](#)
- The role of earth observation in an integrated deprived area mapping "system" for low-to-middle income countries, Kuffer, M.; Thomson, D.R.; Boo, G.; Mahabir, R.; Grippa, T.; Vanhuyse, S.; Engstrom, R.; Ndugwa, R.; Makau, J.; **Darin, E.**; de Albuquerque, J.P. and Kabaria, C, *Remote Sensing*, 2020, 12, 982. [↗](#)
- A grid-based sample design framework for household surveys, Boo G; **Darin E**; Thomson DR and Tatem AJ, *Gates Open Research* 2020, 4:13, [↗](#)

R Package

- wopr: An R package to query the WorldPop Open Population Repository, version 1.0.1, Leasure DR; Bondarenko M; **Darin E**; Tatem AJ, *WorldPop, University of Southampton*, 2020. Maintainer: **Darin E.** [↗](#)

Recent conferences

- Oral: Unraveling the Impact of the 2023 Conflict between Israel and Hamas on Short And Mid-Term Population Internal Displacements in the Middle East, **Darin E**, *European Population Conference*, 2024.
- Oral: Assessing Satellite Imagery Performance for Population Estimation in Data-Scarce Settings: A Modeling Perspective, **Darin E**, *Population Association of America*, 2024.

Teaching

- Workshop: Gridded population modelling for Summer Institutes in Computational Social Science, Covenant, Nigeria 2022, Joseph Ki-Zerbo and Norbert Zongo University, Burkina Faso 2021, Data Science Nigeria Bootcamp 2019
- Tutorials: Statistical population modelling for census support; *WorldPop, University of Southampton*, 2021, [↗](#). Small area population estimates using random forest top-down disaggregation: An R tutorial; *WorldPop, University of Southampton*, 2020. [↗](#).
- R Foundations Course for different Nigerian national agencies, 2020. Population Modelling Webinar, *GRID3 Webinar Series*, 2020. [↗](#)

Awards

- Three-year scholarship from the Leverhulme Centre for Demographic Research (3x32,000), 2022
- Faculty Dean's Prize for Research, University of Southampton, 2021
- Vice-Chancellor Award for Research Impact, University of Southampton, 2018
- Scholarship Sarah Andrieux for Social and Economics Research (800€), 2017
- Four-year scholarship from the École Normale supérieure de Cachan (4x15,600€), 2015