

Postdoctoral Research Associate on Time Series Synthetic Data Generation

[Apply Now](#)

Company: The University of Edinburgh

Location: United Kingdom

Category: life-physical-and-social-science

Postdoctoral Research Associate on Time Series Synthetic Data Generation

UE07 £39,347 to £46,974

School of Mathematics

Full Time - 35 hours per week

Contract Type - Fixed Term - 24 Months

Start date: ASAP or by mutual agreement

We are looking for an exceptional candidate to join the School of Mathematics at the University of Edinburgh to conduct research on the use of generative machine learning models and synthetic time series data with applications to Finance.

This post is advertised as full-time (35 hours per week). We are open to considering requests for hybrid working (on a non-contractual basis) that combine a mix of remote and regular on-campus working.

The post is subject to Level 4 pre-employment screening - PES4 Enhanced Check

The Opportunity:

The project falls under a partnership between NatWest Group and the University of Edinburgh and seeks to develop tailor-made synthetic data generation that can be used for solving the following challenges:

1. Model Risk for ML Systems: Machine learning applications in banking require thorough model risk analysis before being deployed into production. Performance testing and assessing the model's performance at edge cases, considering accuracy, fairness, and explainability metrics, are crucial. However, these assessments are often limited by the

availability of historical data. By introducing synthetic data generation, we can enhance the performance analysis and address the limitations imposed by historical data scarcity.

2. Benchmark Data Sets: The bank currently lacks shareable benchmark data sets that provide appropriate privacy guarantees. This absence of standardized benchmark data sets results in lengthy and costly evaluation processes involving multiple data-sharing agreements when assessing commercial third-party ML solutions. Widely available benchmark data sets for various use cases can also enable the research community to systematically compare and evaluate novel ML solutions.

3. Data Fluidity: The lack of high-quality private synthetic data hinders collaboration with external organizations, such as academics, as well as internal data science teams. By developing tailor-made synthetic data solutions, we can enable smoother collaboration and knowledge exchange with external stakeholders and internal teams, fostering innovation and advancements in the banking sector.

The objective of this project is to understand the appropriate balance between privacy, fidelity and utility of synthetic data for applications such as Credit Risk and Pricing. This will require the development of novel algorithms and approaches for (conditional) time-series data generation. The candidate will be working with Professor Lukasz Szpruch (University of Edinburgh and The Alan Turing Institute) and Data Scientists at NatWest Banking.

Your skills and attributes for success:

Knowledge of time-series generation techniques, such as signature-based methods, causal optimal transport, or neural (S)ODEs. [insert brief bullet point]

Solid programming skills: Python, Pytorch, Jax.

Ability to evaluating the utility, similarity, and privacy of synthetic data sets across use cases

Scope, pilot, and deliver high-quality research activity in partnership with partner stakeholders.

Publish and disseminate high-quality research papers and publications detailing research output and project case-studies.

[Apply Now](#)

Cross References and Citations:

1. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Nyjobscareer Jobs United KingdomNyjobscareer ↗
2. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Europejobscareer Jobs United KingdomEuropejobscareer ↗
3. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Dermatologistjobs Jobs United KingdomDermatologistjobs ↗
4. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Muscatjobs Jobs United KingdomMuscatjobs ↗
5. Postdoctoral Research Associate on Time Series Synthetic Data Generation
CleanerjobsnearmeJobs United KingdomCleanerjobsnearme↗
6. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Scholarjobs Jobs United KingdomScholarjobs ↗
7. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Braziljobs Jobs United KingdomBraziljobs ↗
8. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Nightshiftjobs Jobs United KingdomNightshiftjobs ↗
9. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Biologyjobs Jobs United KingdomBiologyjobs ↗
10. Postdoctoral Research Associate on Time Series Synthetic Data Generation
PropertyjobsJobs United KingdomPropertyjobs↗
11. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Socialmediajobopportunities Jobs United KingdomSocialmediajobopportunities ↗
12. Postdoctoral Research Associate on Time Series Synthetic Data GenerationFree-
hiring Jobs United KingdomFree-hiring↗
13. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Maxillofacialjobs Jobs United KingdomMaxillofacialjobs ↗
14. Postdoctoral Research Associate on Time Series Synthetic Data GenerationDelhijobs
Jobs United KingdomDelhijobs ↗
15. Postdoctoral Research Associate on Time Series Synthetic Data Generation
Businessjobs Jobs United KingdomBusinessjobs ↗
16. Postdoctoral Research Associate on Time Series Synthetic Data Generation

ForestjobsJobs United KingdomForestjobs ↗

17. Postdoctoral Research Associate on Time Series Synthetic Data Generation

DublinjobsJobs United KingdomDublinjobs ↗

18. Postdoctoral Research Associate on Time Series Synthetic Data Generation

Jobsinindia Jobs United KingdomJobsinindia ↗

19. Postdoctoral research associate on time series synthetic data generation Jobs United kingdom ↗

20. AMP Version of Postdoctoral research associate on time series synthetic data generation ↗

21. Postdoctoral research associate on time series synthetic data generation United kingdom Jobs ↗

22. Postdoctoral research associate on time series synthetic data generation Jobs United kingdom ↗

23. Postdoctoral research associate on time series synthetic data generation Job Search ↗

24. Postdoctoral research associate on time series synthetic data generation Search ↗

25. Postdoctoral research associate on time series synthetic data generation Find Jobs ↗

Source: <https://uk.expertini.com/jobs/job/postdoctoral-research-associate-on-time-series-syn-united-kingdom-the-university-of-ed-aa99c95a3e/>

Generated on: 2024-05-03 by Expertini.Com