# Those who seek to shape the future, always find a way.

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## **Master-Thesis**

## **Machine Learning in Energy Trading** m/f/t

RWE Supply & Trading GmbH, Gas Portfolio Management, Essen, Germany

To start as soon as possible, Full time, Fixed Term

#### Your future plans

The Portfolio Development & Structuring team (PDS) is looking for a curious and enthusiastic Master-Student with interest in the energy market, strong numerate background as well as IT-affinity. As part of our Machine Learning Team you will develop, implement and improve machine learning tools to improve pricing, forecasting and trading activities. This is a temporary, full time position for a 6-9 months period.

- You will deep dive into latest machine learning techniques and apply them to analyse gas, oil and coal forward curves. The ML approaches may range from e.g. random forests to recurrent neural networks
- You will implement these ML tools in Python, present your ongoing results to our Machine Learning Team and improve your approaches iteratively
- Target of your analysis will be to improve pricing of portfolio products, to increase the accuracy of forecasts on supply-demand balances and/ or to develop new trading strategies
- As in any data science project here you will also need to select and pre-process data to allow for a smooth ML implementation
- · You will conclude your time in our department with a presentation of your results for the whole team

#### Your powerful skills

- You are working towards Master's degree in Mathematics, Economics, Finance, Sciences or equivalent
- You have a strong background in Linear Algebra and a basic knowledge of stochastics and statistics
- You have a strong affinity to data analysis and maybe first practical experience via previous internships or academic projects
- In general you have a systematic approach to get an overview over a wide range of models in order to compare them and pick the best alternative
- You actively focus on achieving results and are ready to take action in case of disappointing results

#### Avantageous, but not a must

Previous programming experience will be an advantage

#### Benefits you can rely on

At RWE, you will find all the advantages of a large technology group. And some merits that are even more crucial: openness and real team work. For we are open to the future and are building on the strengths of each and every individual. We value his/her work and opinion; we listen, pursue active ideas management and engage in direct exchanges. Respect, appreciation and mutual trust are the hallmarks of cooperation within the international RWE team.

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Apply now with just a few clicks: ad code **19319** Any questions? Jörg Rickert (Recruiting), T: +49 201 5179-1278, Markus Schicks (specialist department) T: +49 201 5179-1114 We look forward to meeting you!

We value diversity and therefore welcome all applications, irrespective of gender, disability, nationality, ethnic and social background, religion and beliefs, age or sexual orientation and identity.

Of course, you can find us on LinkedIn, Facebook, Twitter and Xing, too.

**Powering. Reliable. Future**. This is RWE. Supplying the future with renewable energy requires not only courage and visions, but the security of a reliable infrastructure as well. RWE has 120 years of experience in an energy world that is constantly changing. And a clear future strategy.

50 Energy Traders. 260 additional experts on the floor. Another 1000 professionals aside. Become part of RWE Supply & Trading and shape the future of the trading business to make energy reliable.

