

# Demystifying AI & Data Science

## **Abstract:**

Artificial Intelligence (AI), Machine Learning (ML), Data Science, Data Analytics, Data Engineering, Ethics of AI, and Algorithm Transparency are terms used both by computer scientists, organizations, and the general public. A majority of citizens are aware that these technologies are having a rapid and profound impact on our daily lives as well as on society at large. Whether it is being approved or denied a loan, fake news, digital profiling by companies, or recommendations of what we should read or buy next, given a reading or purchasing history.

One of the biggest challenges we face is that all these terms have a different meaning, depending on whom you ask. Examples are “AI is just Machine Learning, right?”, “Data Science, Data Analytics, Data “whatever”, it is all the same, no?” or “AI is just a new fancy word for Data Science!”. This leads to confusion, wrong expectations, and misunderstanding, which can send people and organizations on the wrong path and can be down-right costly for our society.

In this talk, I will seek to demystify modern notions of AI, outline the emergence of Data Science and its relevance (in particular related to AI), and further identify the respective roles of the Data Scientist and a Data Science Team. I will discuss a concrete end-to-end Data Science Project, which is based on a concrete use case of Predictive Analytics in the Health Care industry.

We will look at this project both the business and the technical perspective. Topics for the business perspective are the research question, the target deliverable(s), stakeholder management, communication, and story telling. The technical perspective will discuss topics like data assessment, data quality, data engineering, machine learning modelling (including training, validation, and testing), production of ML models, ML/Data pipeline and workflow. Finally, I will also discuss the “do’s” and “don’ts”, which – in my opinion – should be considered during data science projects.



## **Speaker Bio:**

Wilco van Ginkel is MLT’s Data & Analytics Lead and a seasoned professional with in-depth knowledge and extensive international working experience in the field of Artificial Intelligence (AI), Data Science, and Cyber Security. He worked at strategic, tactical and operational levels within start-ups as well as in small, medium, and large enterprises. Wilco is the founder of a3i, Seculior, the CSA Dutch Chapter, and co-founder of the CSA Big Data Working Group. He is a frequent speaker, lecturer, and author with a focus on Trusted/Responsible AI and passionate about helping (aspiring) data scientists in their career and professional development.

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