# Propositions

accompanying the dissertation

## Learning Curves with Little Data

by

**Özgür Taylan Turan**

1. All assumptions are safe to use in practise but only if they are subjected to explicit validation at regular check-points. ◄
2. Social media presence is no longer a choice for a scientist.
3. Proper analysis of models is only possible with synthetic datasets.
4. STEM (Science, Technology, Engineering and Mathematics) PhD programs often fail to encourage candidates to read social science and philosophy topics, resulting in ethical and societal blind-spots.
5. LLM-assisted coding democratizes software development for non-programmers, but makes expert developers more vulnerable to errors they cannot easily detect.
6. Benchmarking tabular foundation models with task-specific models is misleading.
7. The future of AI depends on learning algorithms that can learn in the presence of uninformative data.
8. Scientific research without societal obligation, leads to more novelty and depth with similar long-term societal impact.
9. If major technology companies establish their own degree-granting institutions (i.e. BSc, MSc, PhD), then traditional universities can educate scientists.
10. In scientific software development, the intellectual work that results in a feature is as significant as the act of implementing that feature.

These propositions are regarded as opposable and defendable, and have been approved as such by the promotor(s) Prof. dr. M. Loog, and Prof. dr. ir. M.J.T. Reinders and copromotor Dr. D.M.J. Tax.

◄ pertains to this dissertation.