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Quality Assurance of Artificial Intelligence Systems

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Initial Plan

- Develop the structure and thesis summary of the work
- Formulate hypotheses identifying key challenges in artificial intelligence system testing
- Conduct a literature review on quality assurance methods for AI systems, with a focus on testing standards and regulatory frameworks



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Work in Progress

- Applied spatial analysis using regression models to begin writing a paper on the availability of quality education in Riga, depending on district-level differences.
- Preparing a practical course on spatial data analysis using the GeoPandas library for students



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Work in Progress

- Create datasets using statistical data from Latvia for hypothesis testing — especially to analyze whether one indicator significantly influences another
- Focus not only on distances between locations, but also on real travel routes to measure time required to reach certain destinations
- Collect data on public transportation stops and explore methods to analyze routes from a given stop to a target destination
- Build a spatial weight matrix for Latvian municipalities that accounts not only for direct neighbors, but also for second-order neighbors and the influence of major cities.



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Plans for the next months

- Explore possibilities for using AI in spatial analysis
- Review literature on the integration of AI techniques with spatial data analysis
- Review literature about quality assurance for AI systems



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Thank you for
your attention!



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