



Open Discussion #3

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April 2025

Theme

Software Engineering in AI Era!

DataSys 2025 & ComputationWorld 2025



Coordinators

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Coordinators

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Questions on the Table

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Q&A

What are the changes in the software development Lifecycle?

How to select the appropriate AI-based tools?

What is the training cost and the ROI?

Is Licensing a bottleneck for a larger adoption of AI-based tools for software development?



Development Models

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- **Paradigm change / leaning towards LLMs, LCMs**
 - From classical development models, through agile approach using AI-based tools (**If trained on bad decisions, it will advise wrong decisions**)
 - Both data and data processes **can be uncontrollably altered** (on top of being potentially **faked or only partially true**)
 - Customized LLMs repositories (**need dedicated corporate business units**)
 - Understanding and explainability are key, but **unlikely to be transparent and rather impossible to be achieved** with a comfortable level of trust
 - The outputs of **AI-tools reflect the data they are trained on** and the weights (quasi-artificially, by recursive learning) given to data
- **> Explainable Testing become a cornerstone**



From LLMs to LCMs

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- **Increase in model mismatches**
 - **Dedicated** per-domain and cross-domain LLMs
 - **Instable (evolving)** models
 - **Optimizing resources and costs via LCM (Large Concept Models)**
 - **Poor and risky (unchecked) customer feedback**
 - **Potential semantic confusion** in LCMs
- **> LCM at rescue for resource optimization (?)**



Licensing

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- **Instable and proprietary conditions of use**
 - **Restrictive** licensees
 - **Associated guaranties**
 - **Costs of updates (versioning)**
 - **Uncontrolled competition** of multiple users
 - **Risk of sharing business data**
- **> Read, take countermeasures, and understand, then accept the License terms!**



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