



Bias Effects and Notable Generative AI Limitations

Cayuse Lightning Talk

POC

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Bias Effects

Unintended data and statistical errors give rise to unanticipated consequences.

Problems

- AI is dependent upon high-quality training data to construct its knowledge framework
- Biased training data amplifies oversights, certain data patterns, and underrepresentation of important data

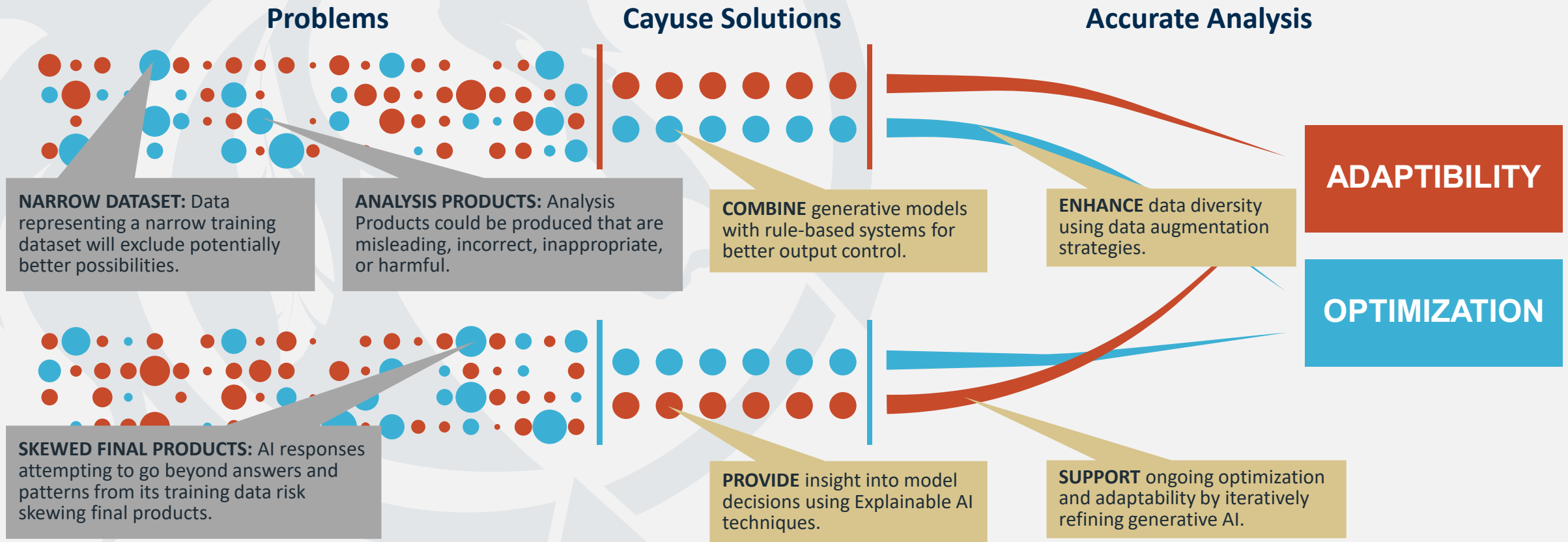


Cayuse Solutions

- First understand the role of data quality throughout each stage of the Generative AI lifecycle, including training
- Apply rigorous statistical practices to assess data and fine-tune with human feedback
 - Retroactively assess Historic Datasets
- Diagnose with bias auditing tools that analyze training data
- Proactively detect bias to catch and correct problems early.

Generative AI Limitations

Limitations on creativity, output quality, testing challenges, and logical coherence can be overcome.

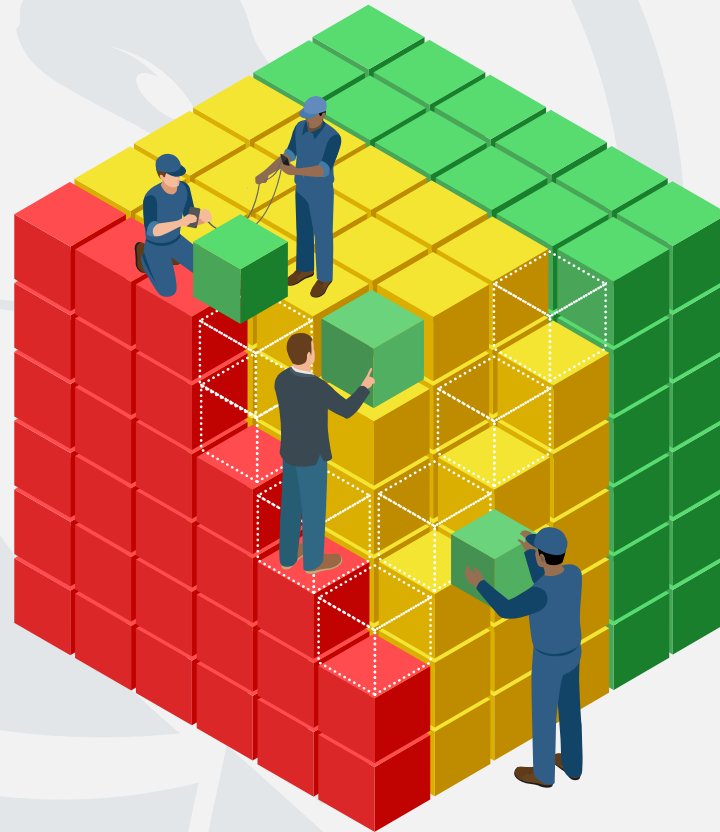


Mitigating Bias and Limitations

Biases and limitations originate from data quality and use errors. Education in good statistical practices and data applicability is a must.

Mitigating Biases

- Include additional datasets to help counteract biases and more comprehensively deliver accurate and robust output
- Regularly audit training data to reflect the intended system usage



Mitigating Limitations

- SME Analysts carefully choose data sources to establish the initial model
 - Add new data sources to widen creative bounds and keep knowledge current
- Test in controlled real-world scenarios reveals initial limitations
 - Include statistically significant number of historic analyses of pre-event data
- A rule-based system can keep output grounded in reality
- Continuous monitoring of AI Training Data using Explainability Techniques will facilitate the human review of discovered limitations

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