AVOID 3 DEVELOPMENT PITFALLS WITH A COLLABORATIVE AI APPROACH

Developing Machine Learning (ML) systems in organizations brings unique challenges. In our research we learned that success comes when developers work with domain experts and decision makers throughout ML development.

Pitfall 1

Treating domain experts as users instead of co-designers

⛔ **Unproductive Question:**

How can we get experts to trust and use our models?

🙌 **Productive Question:**

How can we involve experts and decision makers in deciding what our model should focus on from the beginning?

Pitfall 2

Aiming to produce "unbiased" predictions that experts will follow

⛔ **Unproductive Question:**

How can we produce predictions that are better and less biased than those currently offered by experts?

🙌 **Productive Question:**

What new insights, not currently available to experts but helpful for their decisions, can we realistically offer?

Pitfall 3

Underestimating the collective effort required to organize and label data

⛔ **Unproductive Question:**

What goals do we want to optimize for and what datasets are available for building new models?

🙌 **Productive Question:**

What specific goal can we agree on together with experts and decision makers, so that we can focus our data sourcing and labeling efforts on the most critical parameters?

In one project, a complex matching algorithm for recruiting job candidates failed because it didn't align with the recruiters' existing workflow. In contrast, a simpler tool that spotlighted overlooked candidates succeeded by addressing a specific, practical need.

Lesson learned: instead of developing ambitious cutting-edge tools, focus on supporting the everyday workflows of experts.

KEY TAKEAWAYS FOR DEVELOPERS WORKING IN ORGANIZATIONS

Tip 1
Co-design with experts

Involve experts early to ensure the model addresses real needs.

Tip 2
Give experts a new perspective
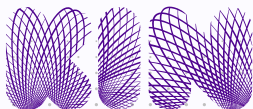
Deliver new insights, not just accuracy.

Tip 3
Plan for data challenges

Ensure aims are narrow enough to be operationalized.

Center for Digital Innovation

Scan the QR code to visit our website, to learn more about our AI@Work research and cases