Human Centric ML Ops Canvas

MLOps: MLOps unifies machine learning development and operations, emphasizing seamless integration and deployment of ML models in production environments. Human-Centric MLOps: Human-Centric MLOps emphasizes how AI fits into human workflows and behaviors, ensuring models align with organizational needs and are adoptable by users.

Comment on the Main Difference: While MLOps focuses on efficient ML deployment, Human-Centric MLOps ensures AI integrates well with human needs and organizational processes.

Scoping This is the phase where we clearly define what problem we want to solve using Al. Think of it like choosing the destination for a journey. We need to ensure that the goal is achievable, beneficial to the organization, and well-understood by everyone involved. Why it's important: Without a clear destination, we might end up building an AI system that doesn't address any real-world problem or need.	Data In the world of AI, data is like the fuel for our car. Before we star our AI model), we need to ensure we have the right kind of fuel phase involves collecting relevant data and preparing it for use Why it's important: Just as a car can't run without fuel, AI models can't function wit the quality of our data, the more efficient and accurate our AI s
 Problem Definition: What specific challenge or opportunity are we aiming to address with AI? How does this problem or opportunity align with our broader organizational goals or needs? What existing solutions or processes are in place, and how does AI offer a unique or improved approach? 	 What kind of data do we need to address our defined problem Which data sources are currently available internally within our the stakeholders or departments responsible for this data? If internal data is insufficient, what external data sources can third-party providers or public datasets that could be relevant? Are there any ethical or regulatory considerations we shou acquiring external data? How can we ensure that data acquisition has proper consent?
Objective Setting: • What are the specific, measurable outcomes we aim to achieve with our AI solution? • How will we measure the success or impact of the AI implementation? • Are these objectives both short-term and long-term, and how might they evolve over time?	
 Feasibility Analysis: Do we have access to the necessary data to train and validate an AI model for this objective? Does our current technical infrastructure support the development, training, and deployment of an AI solution? What are the anticipated benefits of pursuing an AI approach compared to other potential solutions? 	 Preparing Data: Once we've identified our data sources, how will we collate an into a usable format? Are there any immediate quality issues with the data, su duplicates, or inconsistencies, that need addressing? Do we have a clear understanding of what each data field or fea who in the organization can provide clarity or context? How will we divide the data to evaluate our Al solution's pr considering we might want a portion of the data as a reference
Stakeholder Engagement: • Who are the critical stakeholders for this AI project, both internal and external? • How can we ensure consistent communication and collaboration among these stakeholders throughout the AI lifecycle? • What concerns or input might these stakeholders have, and how can we address or integrate their feedback?	
 Expectation Management: How are we communicating the potential outcomes and limitations of the AI project to all stakeholders? What is our estimated timeline for each phase of the AI lifecycle, from scoping to monitoring? How will we manage and address potential shifts in expectations or project objectives as we progress? 	 General Data Availability and Manage Do we have a centralized system or platform within our orgationed and managed? If so, is this system accessible for our Alp Who are the gatekeepers or stakeholders responsible for data in organization? Do we need to get permissions or collaborate initiative? Are there established data management practices or protocols of that we should be aware of or align with? If external data is being considered, how will it be integrated with there compatibility or format issues we should be mindful of?

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Team Name:

_ _ _ _ _ _ _ _ Modelling nce our Al model is ready, it's time to put it into t our journey (or build This is where the magic happens. We take our prepared data and use it to train an Al garage and onto the roads. We integrate the Al and enough of it. This model. Think of it like choosing the best car for our journey, based on the terrain and Why it's important: destination. An AI model that remains unused is like a car t I-driven solutions reach the people who need th Why it's important: thout data. The better Just as you'd choose a rugged SUV for a mountain trip and not a sports car, selecting or building the right AI model ensures we effectively address the problem we set out to system will be. **Requirements & Expectations:** • How will the AI model be integrate n or opportunity? • What specific requirements do we have for our model? For instance, do we need it to APIs or other interfaces that need be highly explainable for regulatory or user trust reasons? r organization? Who are • How accurate does our model need to be? Is there a minimum performance threshold • With which systems, databases, o that it should meet? there any specific compatibility cor we consider? Are there • Are there specific considerations regarding false positives or false negatives? How critical would it be if the model makes a mistake, and what could be the potential ould be aware of when repercussions? tion respects privacy and ----User Expe • How will end-users interact with th mobile app, or some other interfac • What will the user experience look and satisfying for the user? ----. Internal Capabilities: • Do we have internal teams or departments with the expertise to build and train this • If not, do we need to consider external contractors or consultants? How will we evaluate and choose the right external partners? • Does our organization have the necessary infrastructure and tools to support model development, training, and testing? d consolidate this data uch as missing values, eature represents? If not, performance effectively, e for its success? • What technical skills are needed for • Are there specific programming la proficient in? Do we have the necessary expertise collaborate with external partners? -----**Research & Existing Solutions:** • Are there existing models or solutions available, either within our organization or externally, that address similar problems? Can these be adapted or fine-tuned for our use case? • Has someone documented building a similar model in research papers, case studies, or online platforms? • Can we leverage insights or findings from these existing works to expedite our model development or to set performance benchmarks? Hardware 8 Is the deployment purely software-(e.g., IoT devices, sensors, edge dev • If there's a hardware aspect, how there any specific environmental or nization where data is roject? nanagement within our with them for our AI within our organization **Model Selection & Evaluation:** ith our internal data? Are Based on our problem definition and requirements, what types of machine learning ----models might be appropriate? (e.g., regression, classification, clustering) • Which metrics will we use to evaluate our model's performance? (e.g., accuracy, precision, recall, F1 score) What is the expected value or imp • How will we handle trade-offs? For instance, if achieving higher accuracy compromises our broader business or organizatio model explainability, how will we prioritize? How will we measure the success used?

Use	Case	Name

Canvas Date:

eployment		Usage		
to action in the real world. This phase is like driving our car out of the system into our existing operations, ensuring it's accessible to users. that's never driven—it's a wasted resource. Deployment ensures our them.	Now that our AI system is in operation, we need to follow the rules of the road. This phase emphasizes Why it's important: Even the best AI system can't add value if people do	ensure people are using it effectively. It's like ensuring drivers of training and adaptation.	and passengers know how to use	
ation & Interaction:	People			
d into our existing systems or platforms? Are there to be developed or adapted? or services will the deployed model interact? Are	Decision-Makers: Who are the decision-makers? Before Deployment:	During Deployment:	After Deple	
	 What is the vision for this Al solution in the organization? What specific objectives are we aiming to achieve? What is the allocated budget for the deployment, including hidden costs? 	 What metrics will be used to measure ROI during the implementation phase? What are the major milestones in the deployment roadmap? 	 Is the solution achieved objectives? How does the maintent to the forecasted bud 	
	Users: Who are the users?			
rience & Accessibility:	 Before Deployment: What does the current workflow look like? Which aspects of the current system are pain points? 	 During Deployment: What kind of training will facilitate smoother transition and adoption? How will we ensure minimal disruption during transition? 	 After Deple How intuitive is the end-users? Are there any emerging points post-deploymed p	
le deployed model? Is it through a web application, ce? like? How can we ensure that it's intuitive, efficient,	- - - - - - - - - - - - - -			
	People Affected: Who are the people affected? Before Deployment:	During Deployment:	After Depl	
	 Which roles will be most impacted by the introduction of this AI solution? Are there any concerns or apprehensions among the affected parties? 	 How will we maintain transparent communication with affected parties? What mechanisms will be in place to capture feedback? 	 Have roles been posimpacted post-deploy Were initial coraddressed? 	
al Skills & Resources:				
or deployment? anguages or platforms that our team needs to be e in-house? If not, do we need to hire new talent or ?	List all relevant additional stakeholders	Additional Stakeholders:		
Software Considerations:	Before Deployment:	Processes During Deployment:	After Deple	
will it be sourced, installed, and maintained? Are r logistical considerations to account for?	 Which specific processes stand to benefit the most from the Al's capabilities? 	 Fire there any processes that need to be temporarily adjusted or halted during implementation? How will we ensure a seamless integration of the Al solution into ongoing processes? 	 Are there any unbottlenecks that post-deployment? 	
act of the deployed model? How does it align with ional objectives? of the deployment? What metrics or KPIs will be	 Test Pilots: Who are the ideal candidates to be our first test pilots for the Al solution? What criteria make them suitable for this initial phase? 	Roll-out Roll-out Strategy: • How will the roll-out be structured in phases? • What are the benchmarks for moving from one phase to the next?	 Feedback Mo How will we capture initial roll-out? What mechanisms ar act upon the feedback 	

