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NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

AIM 323

Transform ML development through team-based collaboration

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Collaboration is the norm

Data engineers

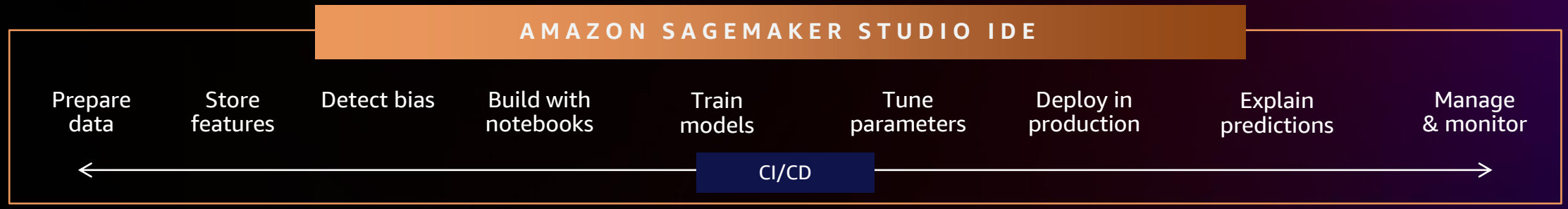
Prepare, analyze, visualize, and glean insights from data

Data scientists and researchers

Build, tune, and train models

ML engineer

Deploy the best performing model, monitor performance, and data governance



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ML builder personas



Data scientist





ML engineer



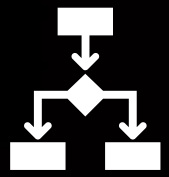
Data engineer

- Collaboration across data engineering, analytics, and data science while building ML workflows
- Often it’s the same person doing all these tasks
- Switching between multiple notebooks, tools, and interfaces reduces productivity

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Key challenges for ML builders



Organize

Relevant resources specific to the business problem



Share

Inefficient and delayed iterations with relevant stakeholders



Collaborate

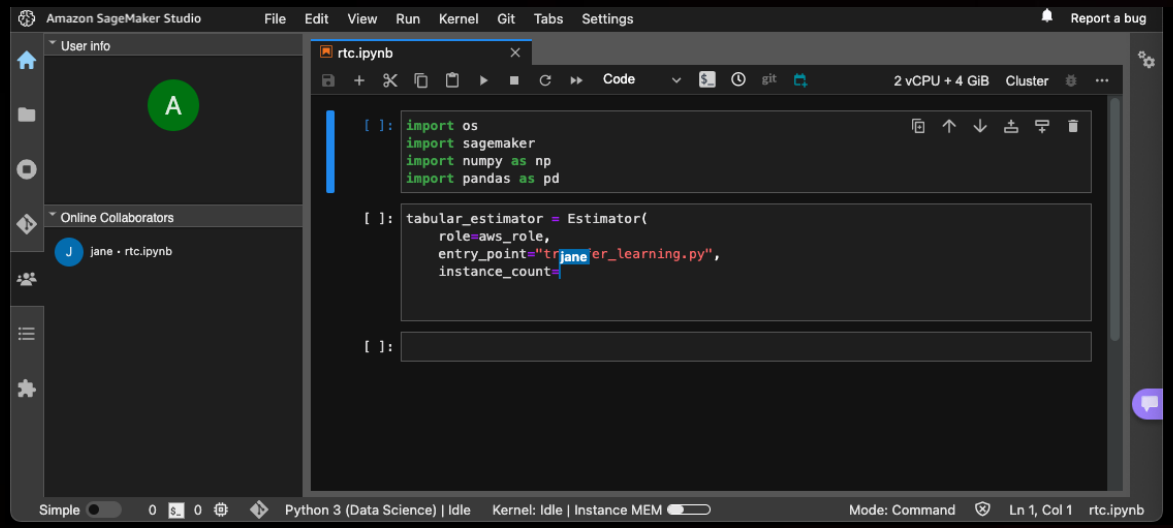
Fragmented asynchronous collaboration

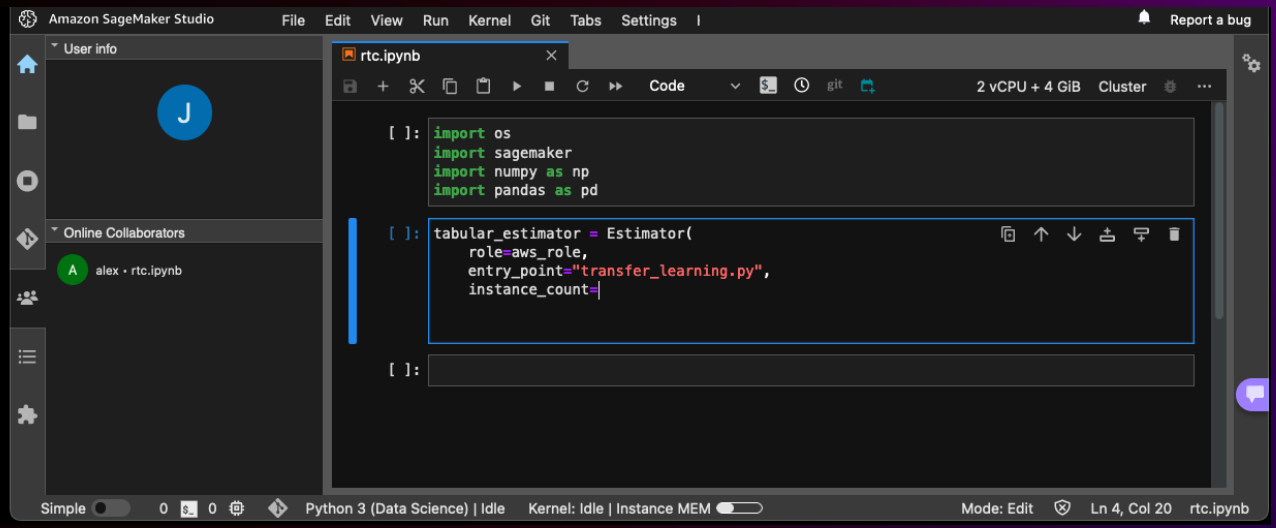
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Real time collaboration

ACCELERATE COLLABORATION ACROSS DATA SCIENCE TEAMS USING SAGEMAKER NOTEBOOKS





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Benefits of shared spaces

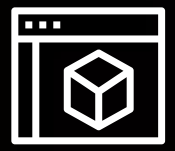
SEAMLESS TEAM-BASED SHARING & COLLABORATION FOR ML PRACTITIONERS IN SAGEMAKER STUDIO

- Access and work on the same notebook as your team members
- Co-edit and co-execute a notebook with your team in real-time
- Share files with your team in the shared Amazon EFS directory
- Only see resources relevant to the business problem
- SageMaker resources are automatically tagged

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How it works



Create a shared space



Neatly organize code, data, and experiments



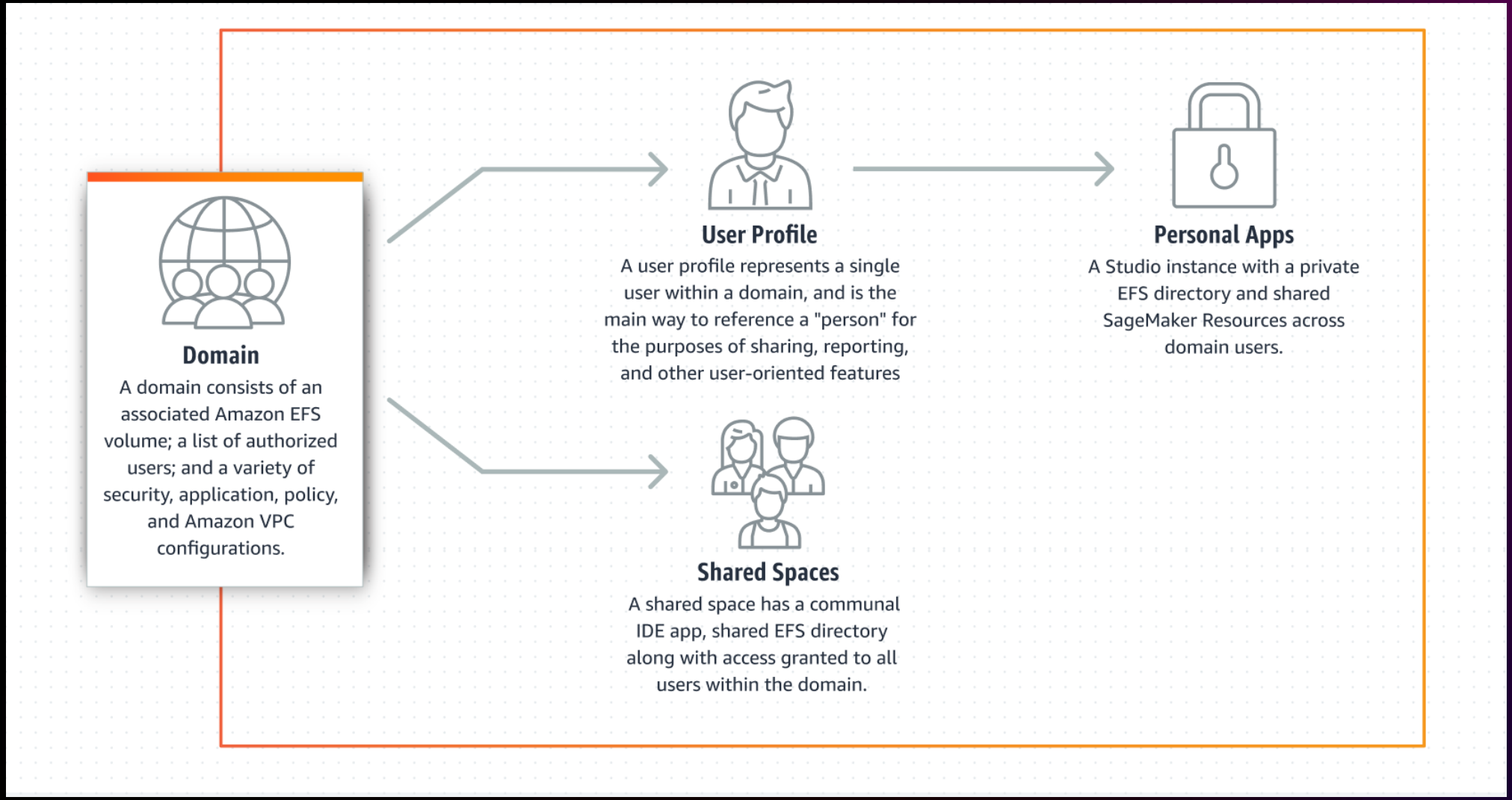
Co-edit, execute, and review notebooks together in real time



Checkpoint code in Git/Bitbucket repositories

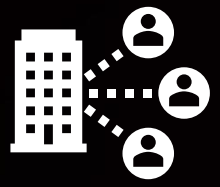
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Use personal apps or shared spaces



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Key challenges for ML administrators



Organization & access control

- Overheads in ensuring resource isolation across groups of users within an account
- Reflecting internal organization structure within an account



Management

- Manage usage and costs granularly
- Manage usage and costs for individual business problems

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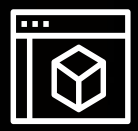
Create & manage multiple SageMaker domains

SCOPE ACCESS TO ML ARTIFACTS TO BUSINESS UNITS & GROUPS OF ML BUILDERS IN YOUR ORGANIZATION

- Reflect internal organizational structure within an account
- Granular cost and usage management
- Setup isolation across different teams using automated tagging

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How it works



Create new Domains in an account



Create execution role to enforce resource isolation



Auto-tagging of resources created within a domain



Group ML builders within different domains to reflect organization structure

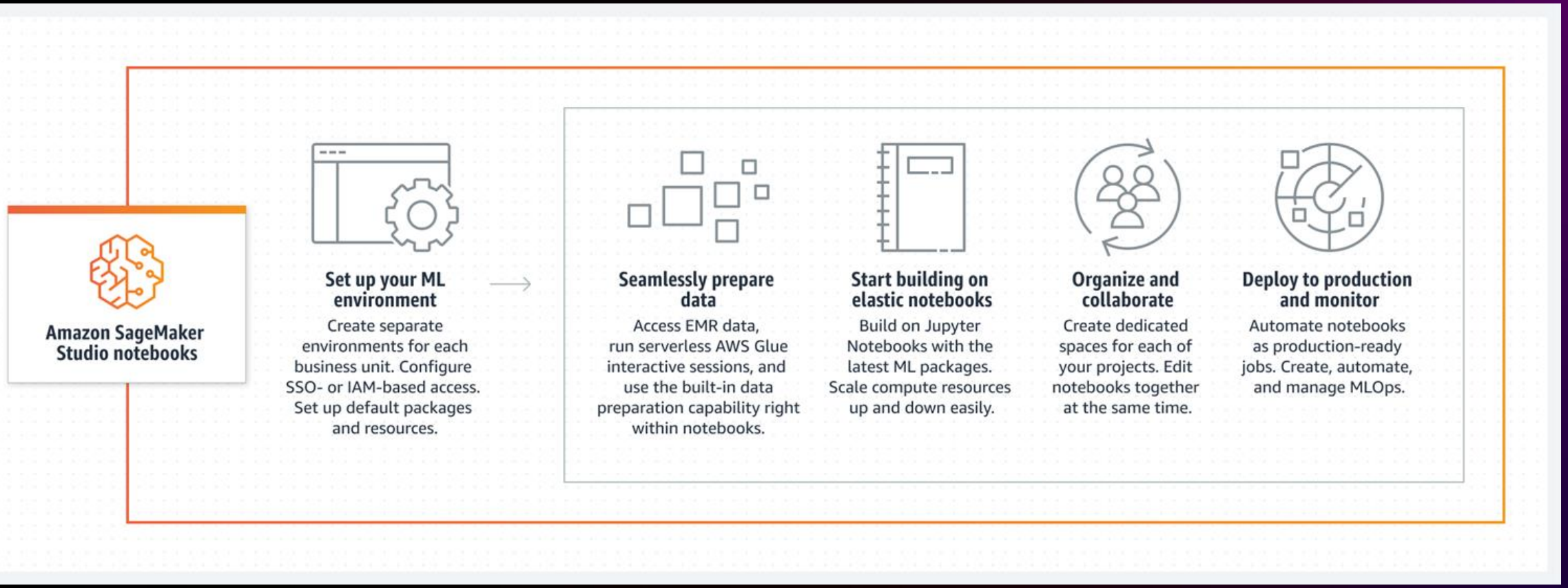


Manage costs and usage

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End-to-end ML workflow



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Customer story - Intuit

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INTUIT MISSION
Powering Prosperity
Around the World

Intuit Strategy



AI-Driven Expert Platform

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Powering prosperity around the world with analytics, AI, and data

730M
AI-driven customer interactions per year

58B
machine learning predictions per day

400K
customer/financial attributes per small business

~700
AI, ML, and data science U.S. patents filed

$113B
consumer tax refunds on our platform per year

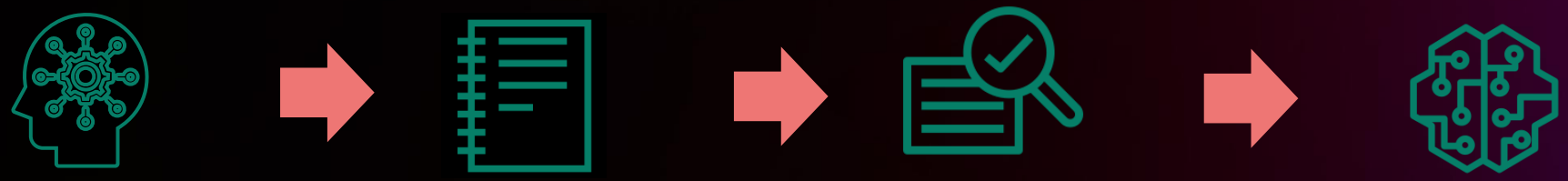
$2.0T
invoices managed on our platform per year

$465B
money moved

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What is Intuit AI Studio ?

"A critical part of model development lifecycle are the tools needed to **explore**, **experiment**, **iterate**, and finalize the data and models for any given AI task before moving to productionize the model."



200+ data scientist and ML engineers

Notebooks

Train & tune

Model

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Why AI Studio chose SageMaker Studio?

AWS Sagemaker is trusted service for Intuit since 2018

- Fully-managed web-based IDE and notebook solution
- Seamless connectivity with Intuit ecosystem
- Allows customization



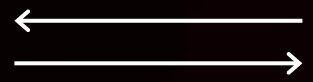
Fully managed



Strategic partner



Sagemaker Studio





Intuit DataLake



Intuit SSO



Enterprise Github

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Current challenges

- Group user profiles and resources to Intuit projects and business units
- Notebook, data, and file sharing
- Tag every job and notebook separately

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How these new features help Intuit?

- Use one domain per Intuit BU
- AI project-based shared spaces
- Enhanced collaboration with real-time co-editing and project based Amazon EFS
- Automated resource & cost tagging for all resources per AI project



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Thank you!

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