Managing Code

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I acknowledge the traditional custodians of the land on which I work and live, and recognise their continuing connection to land, water and community. I pay respect to elders past, present and emerging.

Today

- Enterprise Software
- Features of Software Ecosystem
- Development → Production Workflow
- Deployment
- Future

Enterprise Software Today

- Cloud Based
- Complex
- Independent of Operating System

  Browser Based

Features of Software Ecosystem

- Reliability
- Accessibility
- Reusability
- Interpretability
- Flexibility
- Agility

Ecosystem Considerations

- How do you get the data?
- Where does the code run?
- How is your code organised?
- Where do your outputs go?

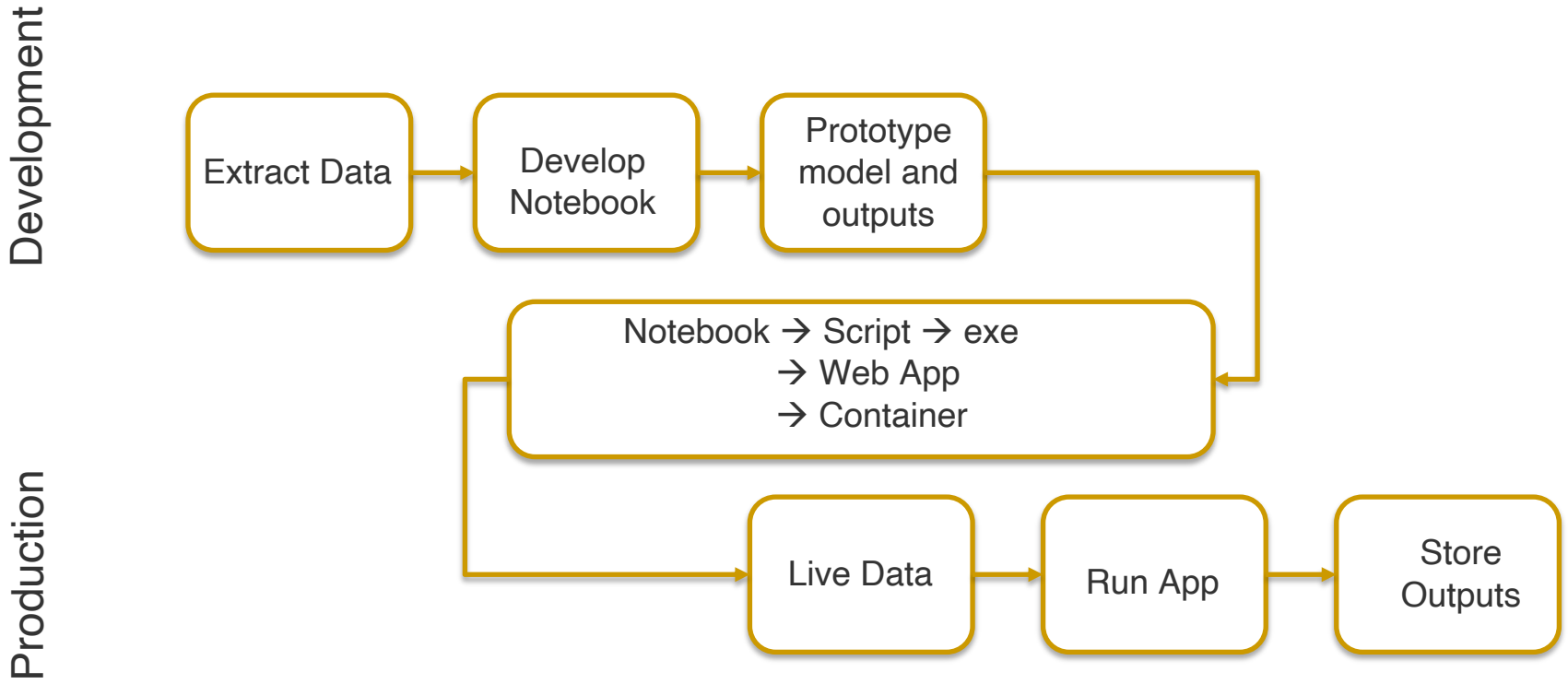
Application

- Development
- Production
- Interface - Widgets + Code
- Deployment

Virtual environments

- Create virtual environment
- Activate virtual environment
- Install required packages
- Deactivate environment

Typical Workflow



Development

- Local Environment

  Jupyter Lab, VSCode,
- Cloud Environment

  AWS, Google Compute, Asure
- Notebook Specific

  Paperspace, Colab

Deployment

- Notebooks as Packages

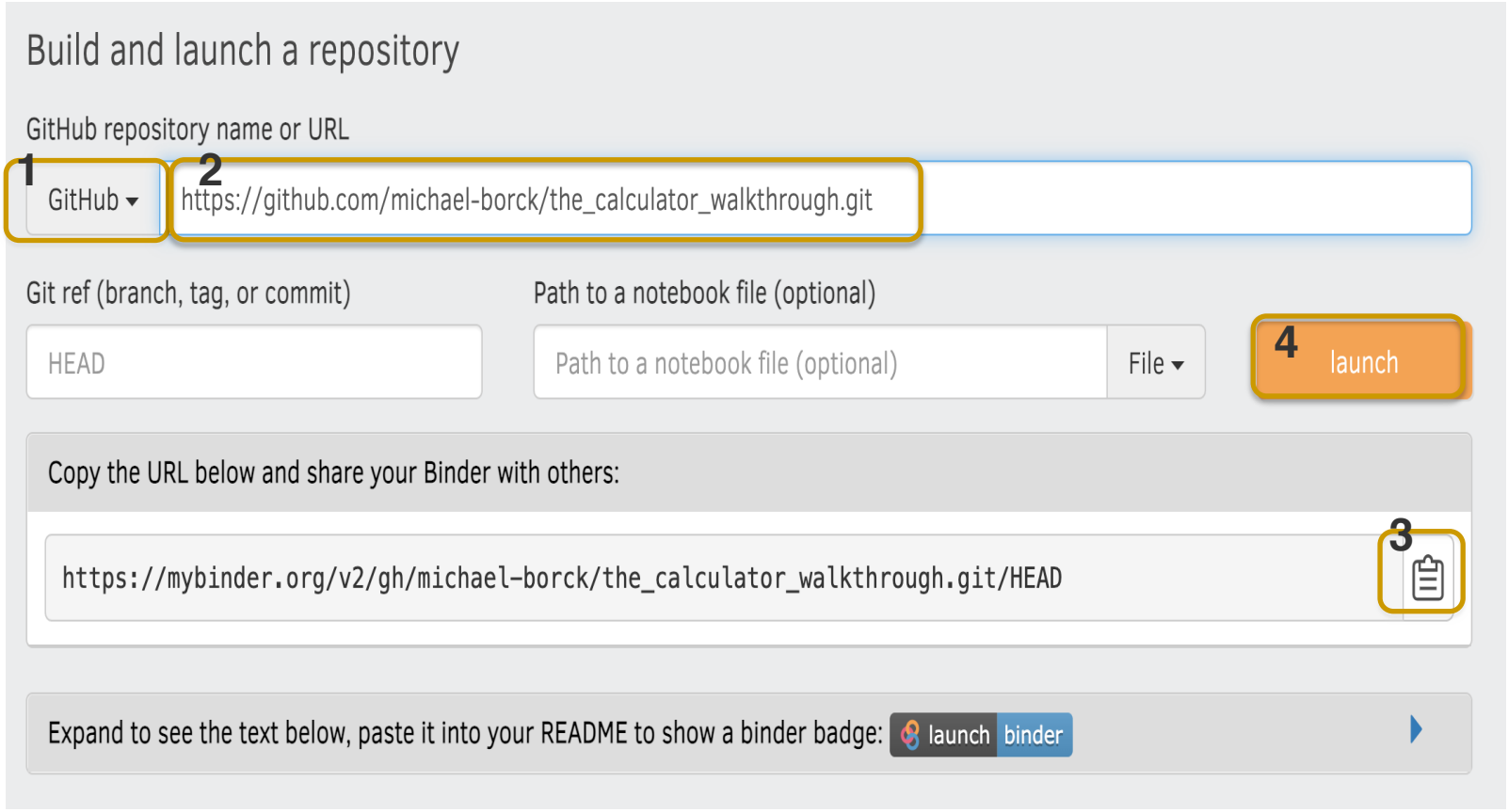
  NBDev
- Notebooks as (Web) Apps

  Ipywidgets, Voila, Appmode, Anvill
- Deploy/Share

  nbviewer, GitHub, Binder, Docker

  nbconvert → Script → Package/Exe

Binder



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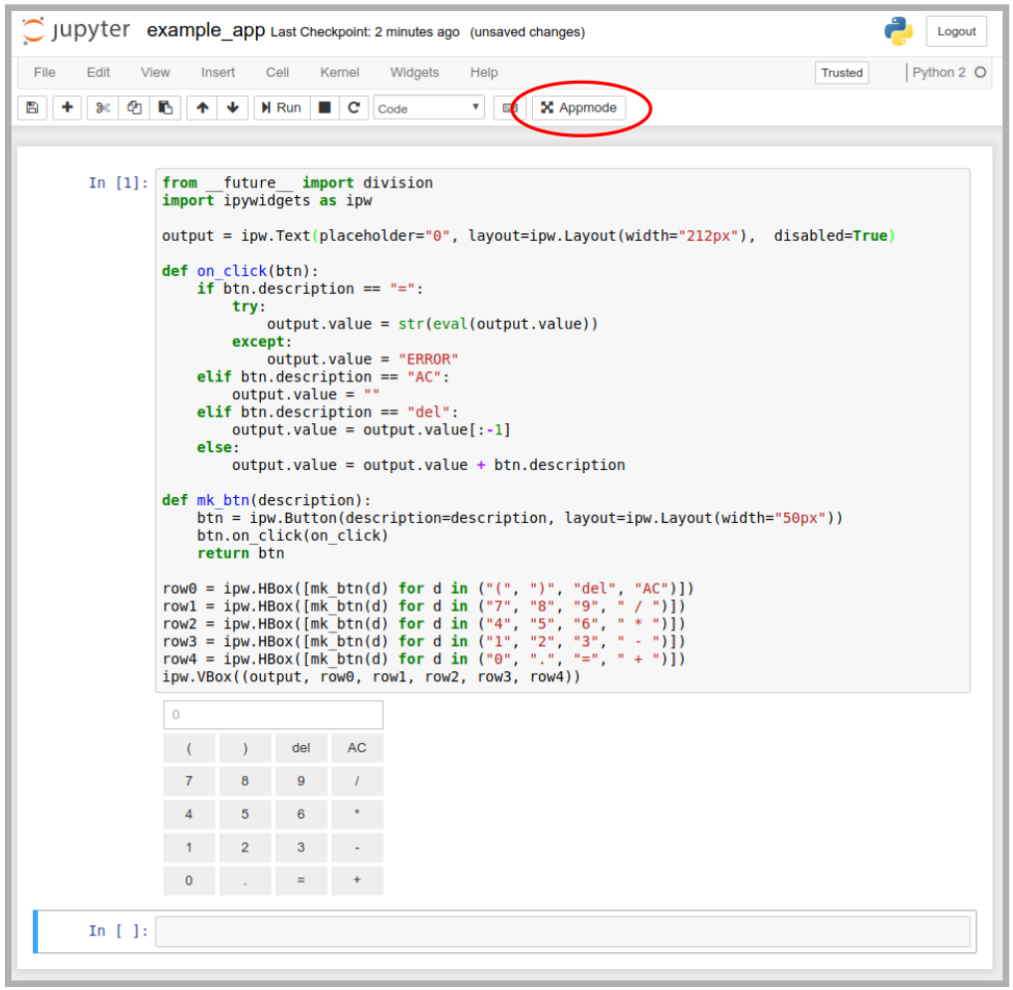
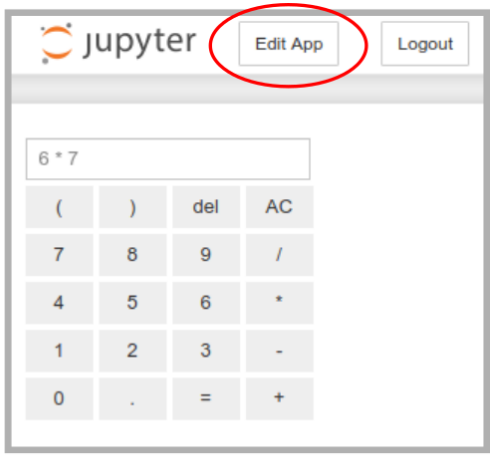
Appmode





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Future

- Notebooks as Applications
- Rise of Containers
- New Platforms
- New Capabilities

Can you?

- State the direction of enterprise software today
- List the features of software ecosystem
- Describe a development to production workflow
- Suggest how to deploy and share code
- Outline a possible future for notebooks