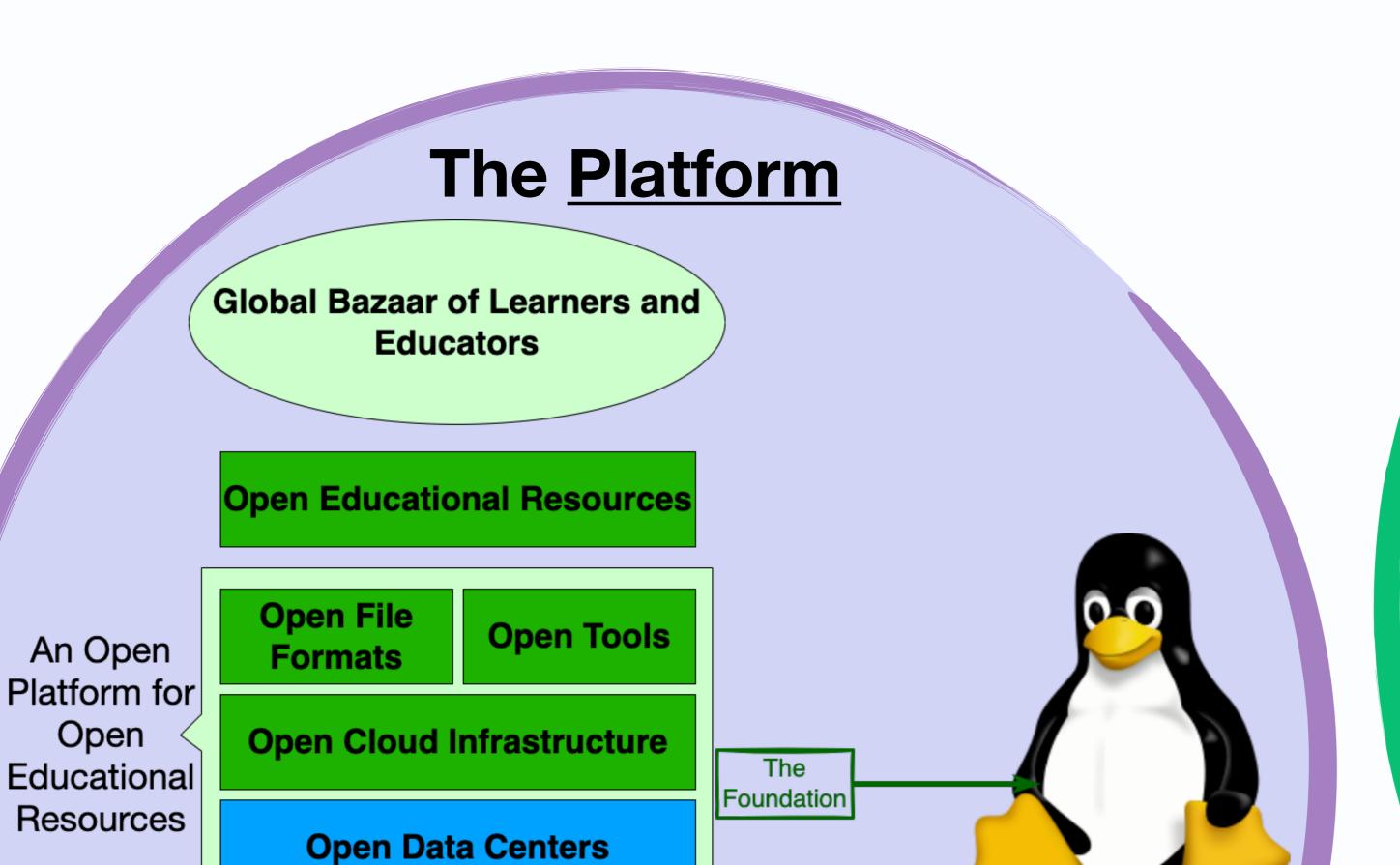
## Open Source Education:

## From Philosophy to Reality





The open ownership model starts with high-performance, open data centers providing the hardware resources. We exploit Linux to enable the use of cloud platforms on top of this hardware. Linux serves as the foundation, allowing us to build a rich environment of tools and services to support a novel approach to educational material.

Linear Algebra, Geometry, and Computation

Dr. Crovella's Book was our inspiration

### OPE

Leverage modern open source technologies to create an open **Environment** and **Platform** in which

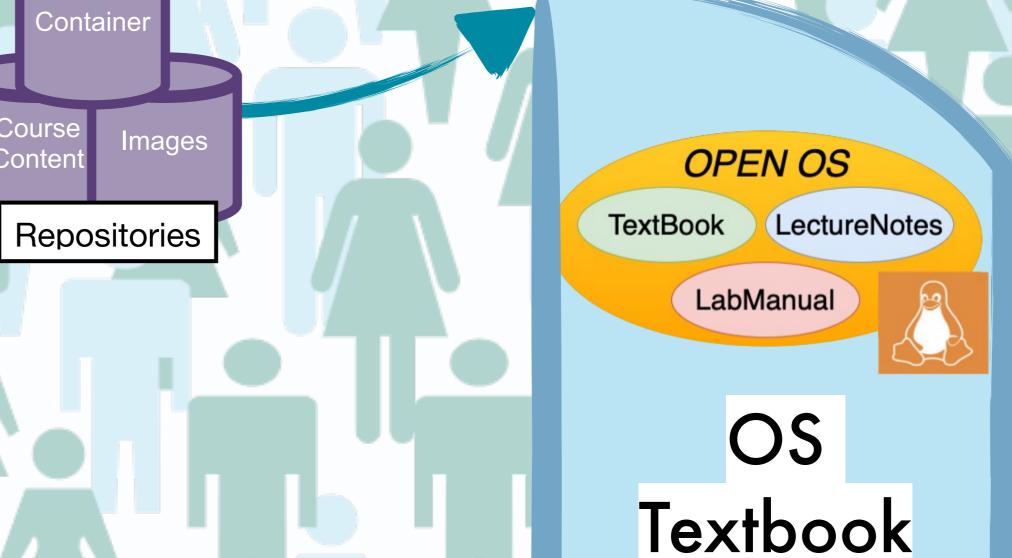
- 1. Educators can create, publish and operationalize high quality open source materials.
- 2. Students require no more than access to a web browser to make use of the materials
- Put Education on a path to Open Source
- Put the power to build, publish, and collaboratively develop such content in the hands of the educators who create it
- Provide tooling that makes the use of this power a manageable endeavor
- Enable community contribution, review and verification
- First class support for collaboration, replication, and continual improvement of open source educational content

#### **OPE Template**

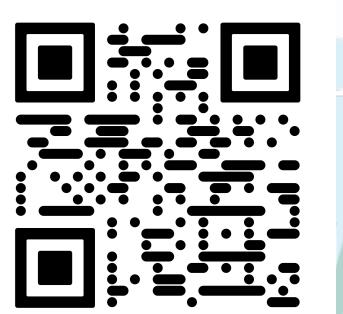
- -Several independent core branches
- -Base container provides interface for specializations
- -Tooling offers support for building course content skeleton, building book, lecture, and lab content, publishing content, building container for authoring, customizing container, publishing container to a repository

### Fledging **Community of OPE** Pioneers RedHatters, Professors, Graduate Students, Interns and Coops BOSTON UNIVERSITY Heidi Dempsey Jonathan BOSTON UNIVERSITY Appavoo **Larry Woodman** Orran Krieger Abirami Danni Shi Arlo Albelli Dhayalan, University of Texas at Dallas BOSTON UNIVERSITY Xinyi Wu, Northeastern University Yiqin Zhang





**A Community** of OS experts collaborating to tell the story of how OS's work



The **Environment**: Communities collaborating in the transparent authoring, editing and use of Course Materials: Textbooks, Lectures, Lab Manuals

An Open

Platform for

Open

Educational

Resources

Global Bazaar of Learners and

**Educators** 

**Open Educational Resources** 

**Open Cloud Infrastructure** 

**Open Data Centers** 

**Open File** 

**Formats** 

The **Platform** 

**Open Tools** 

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The

Foundation

# Open Source Education:

Arlo Albelli, Orran Krieger, Jonathan Appavoo

# From Philosophy to Reality

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## What We've Done:

Arlo Albelli Graduate Student leading summer OPE Effort, Author and editor of Under The Covers book and course instructor.

Yiqin worked to make the RISE Jupyter notebook extension and slide authoring

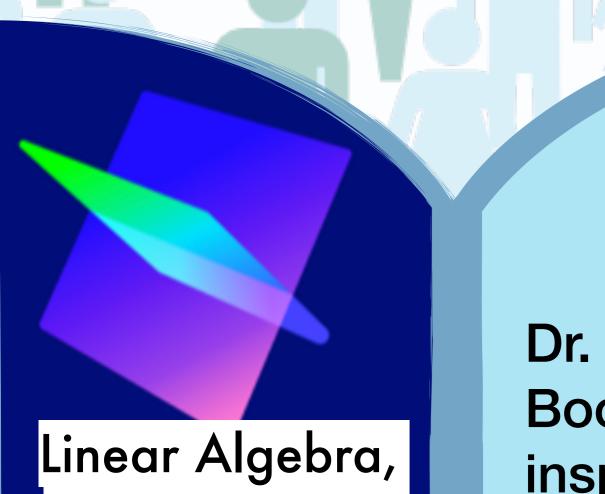
Abirami worked on the development of the base ope container images with all of the necessary software and packages installed to support the Jupyter environment and authoring tools required. In addition to the ope version of the Jupyter stacks Ubuntu image, built a fedora based image for deploying on operate first

Xinyi is working on a testing book to incorporate into the ope template repository that will test various to ensure compatibility is preserved across updates

Danni is mentoring Yiqin to help her with RISE features development and debugging. Working on OPE RHODS environment test automation.

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The First Tries

lab manual

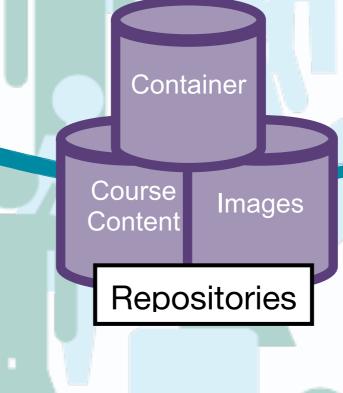
lectures

textbook

Repositories



Under The Covers



OPEN OS TextBook LectureNotes LabManual

> OS Textbook

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