

Two large, stylized white clouds are positioned at the top of the slide against a light blue background.

Cloud Operating Systems

A New Approach to Building Modern Collaborative Web
Platforms

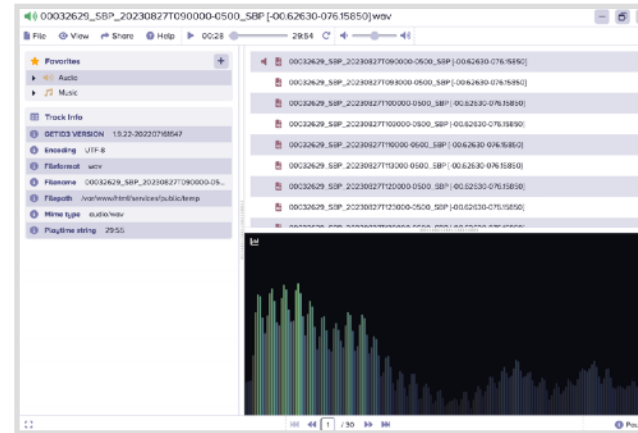
Abe Megahed, Data Science Institute
Data Science Research Bazaar, March 19-20, 2025

Why Cloud Platforms?

- Connect
- Collaborate
- Share
 - Data, Ideas, Software

- **Benefits:**
 - Data Sovereignty
 - User Experience
 - Build Communities

UW Examples



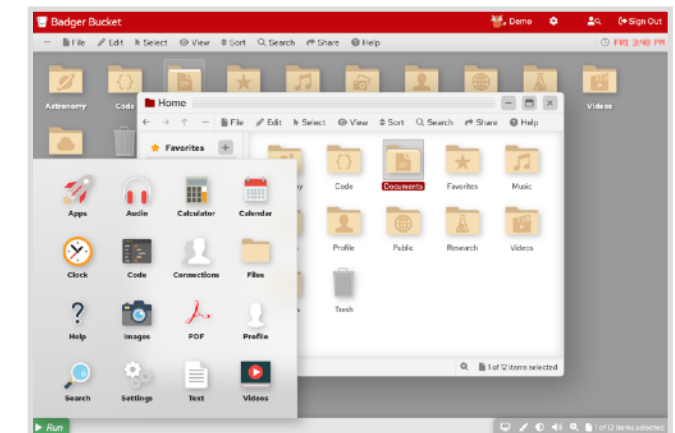
SoundForestLab



Dreamachines.ai



Yesilkoy Optics Lab



BadgerBucket

The Problem

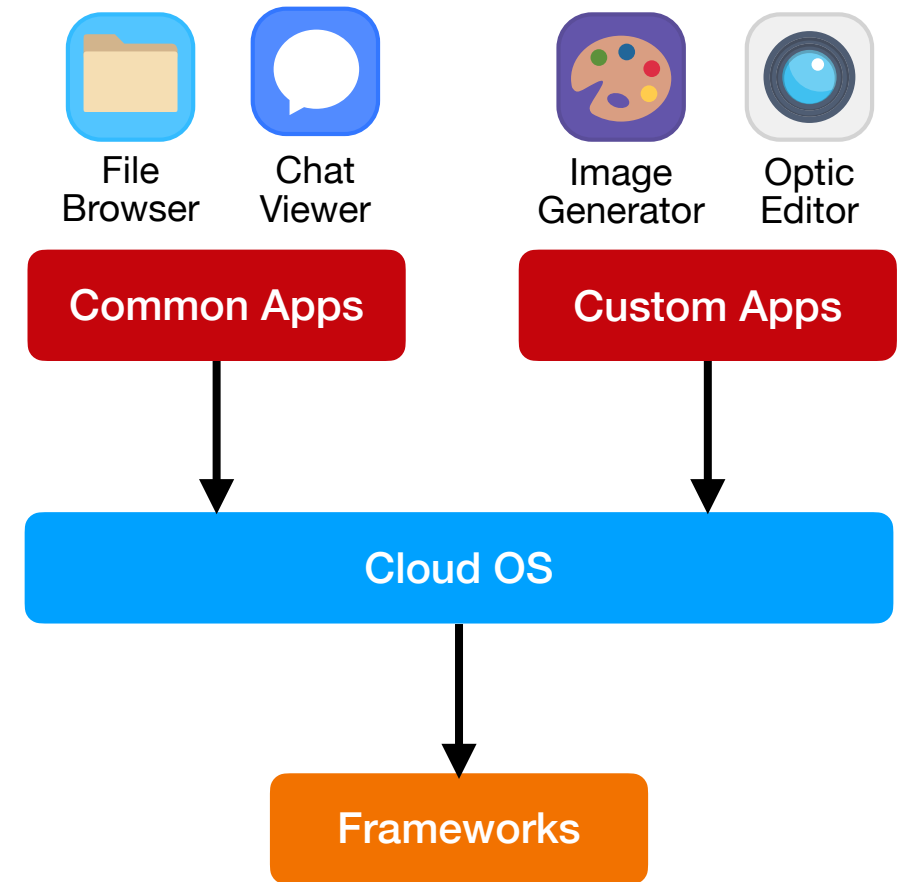
- Current approach requires developers to integrate:
 - Front end frameworks
 - Back end frameworks
 - Libraries (js, css)
 - Package managers
 - Open source packages
- Too difficult, time-consuming





A Better Approach - Use A Cloud OS

- Build web apps like you build desktop apps.
- OS takes care of core tasks: file system, window management, user accounts, managing connections etc.
- Leverage a library of existing apps for common tasks.
- Put your time and energy into the custom apps that make your platform unique.



Sharedigm Cloud OS

For
Platform
Developers



Build Your
Own
Platform

- **Sharedigm OS**
Open Source (MIT Licensed)
<https://www.sharedigm.com>
<https://github.com/Sharedigm>
- **Sharedigm App Store**
contain 40+ apps
<https://github.com/Sharedigm/SharedigmAppStore>

For
Platform
Operators



Deploy an
Existing
Platform

- **RocketKitty Family of Platforms**
<https://www.rocketkitty.org>
<https://github.com/rocketkitties>
- 9 Platforms for various applications.
- Pre-built, ready to deploy out of the box.
- Include Docker configurations.
- Add Your Own Custom Branding

Thank You!

- If you'd like help building your own data management platform, let us know - we'd be glad to help!
- Abe Megahed
amegahed@wisc.edu
- Data Science Institute
<https://dsi.wisc.edu>

