MICHIGAN STATE UNIVERSITY

Beta Presentation

Image Analysis Tool for Biphasic Solutions

The Capstone Experience

Team AbbVie

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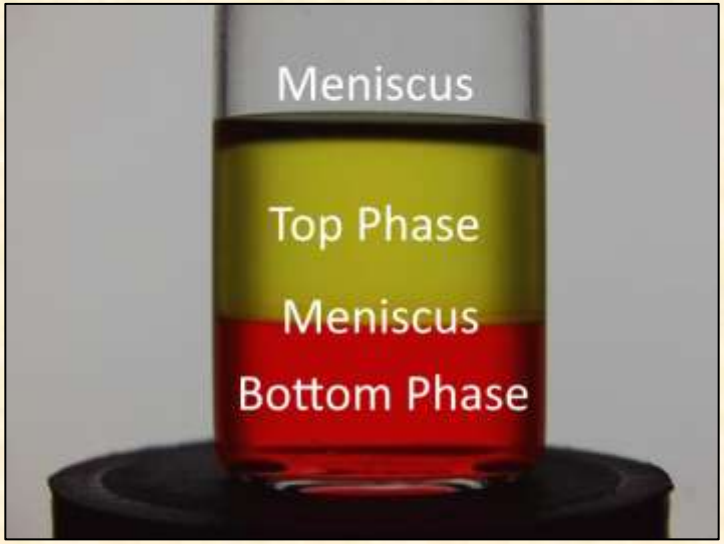
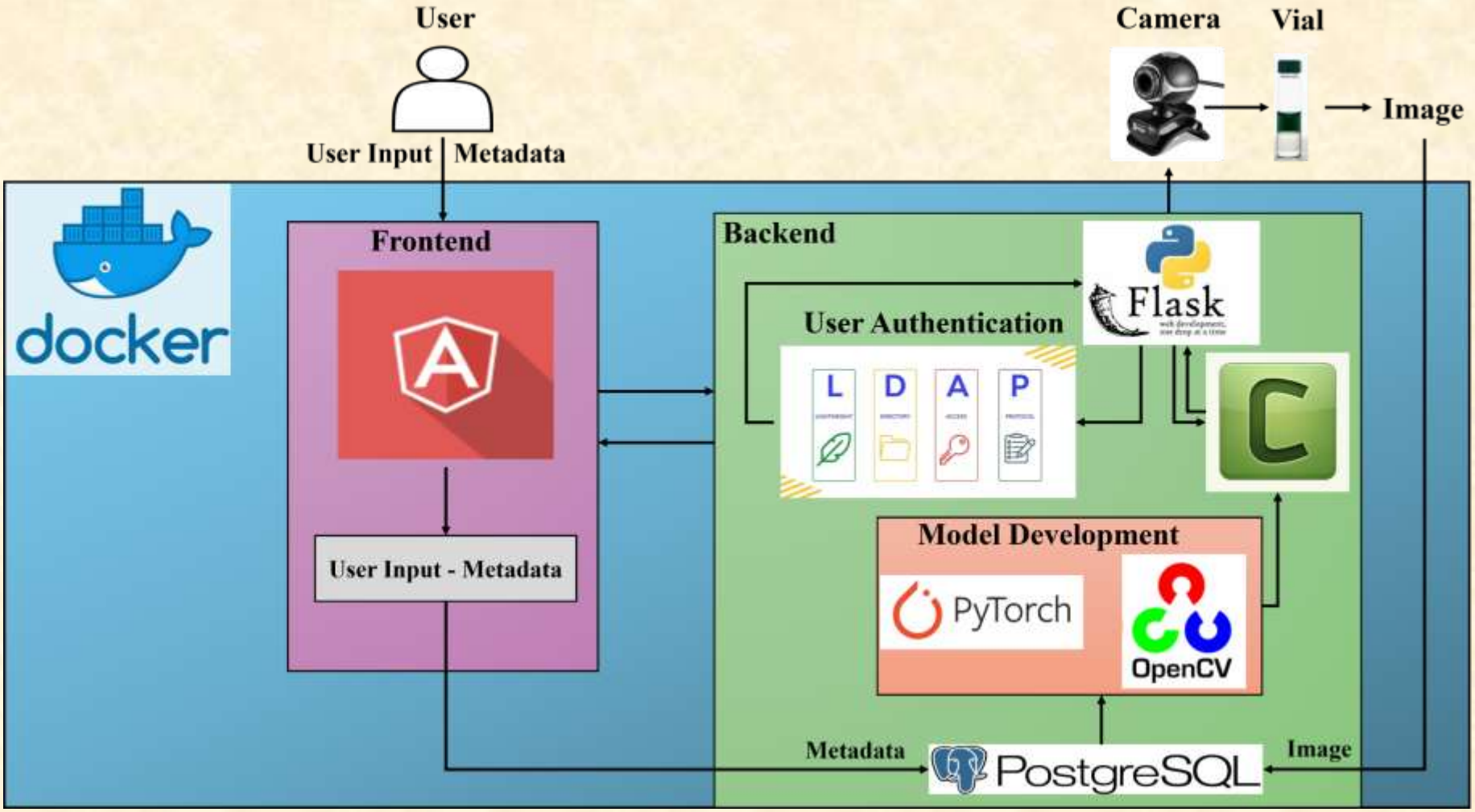
From Students…
…to Professionals

Project Overview

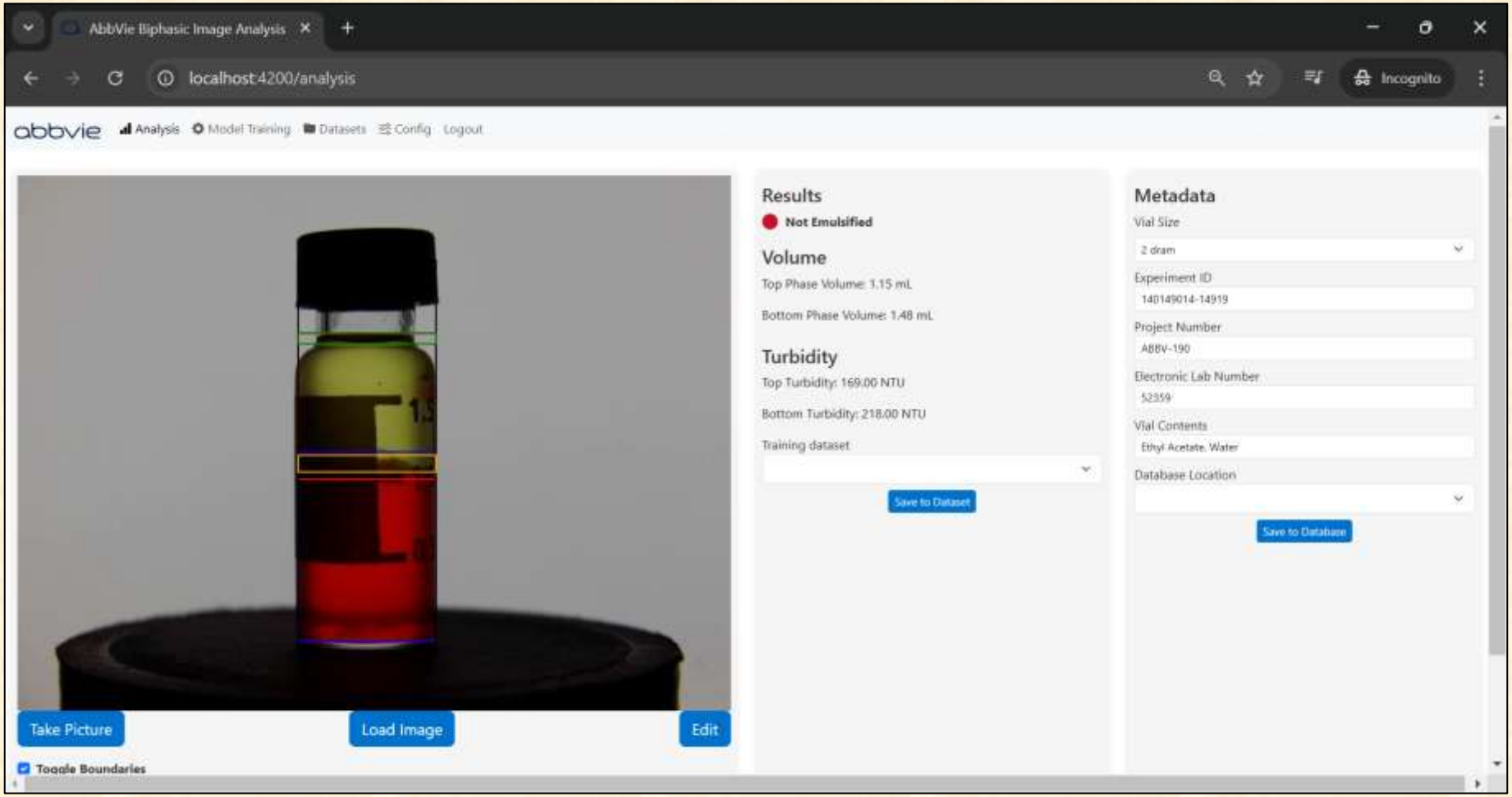
- AbbVie, North Chicago, IL – Pharmaceutical Company
- Automation of Manual Analysis via Computer Vision



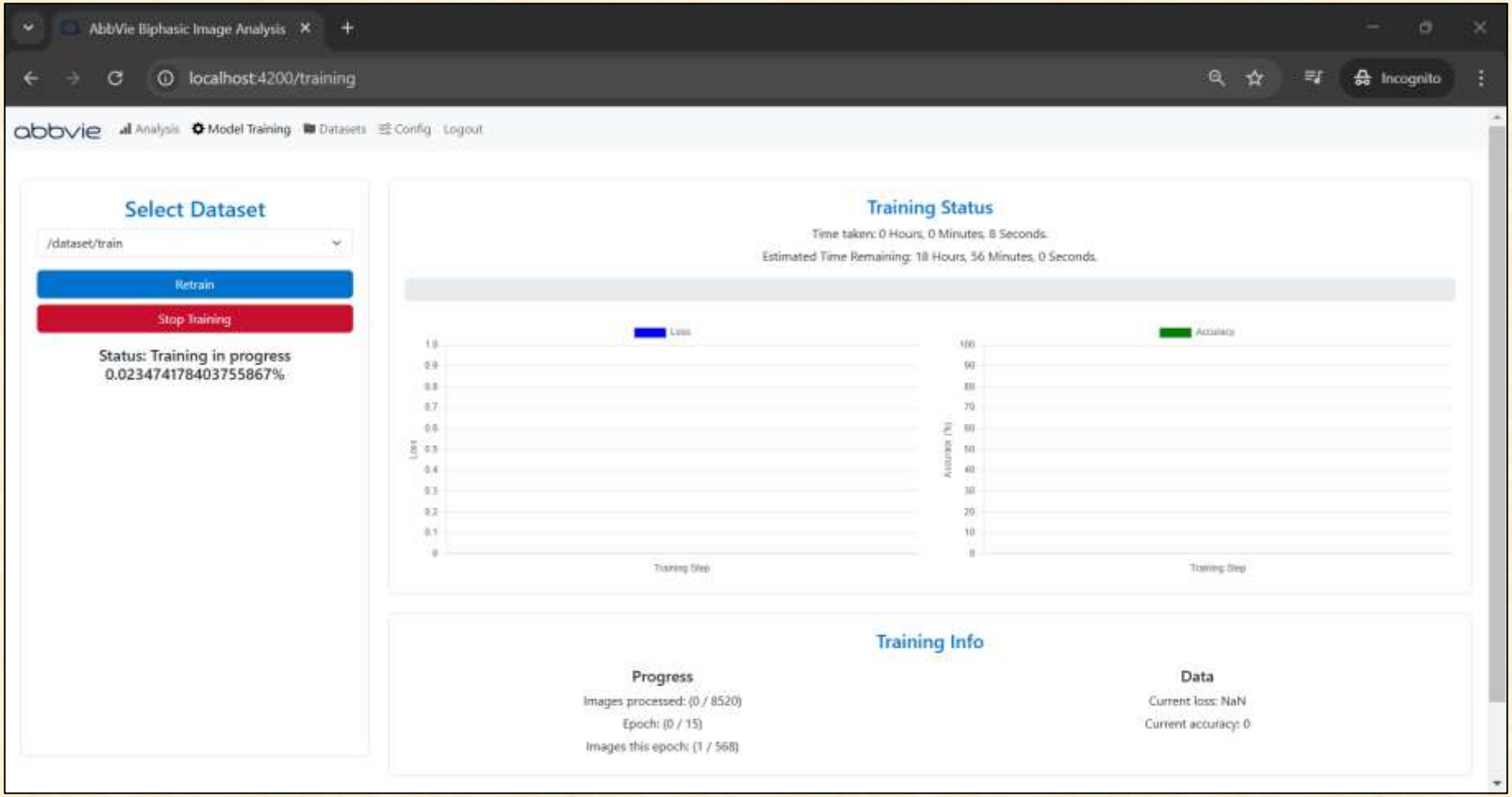
System Architecture



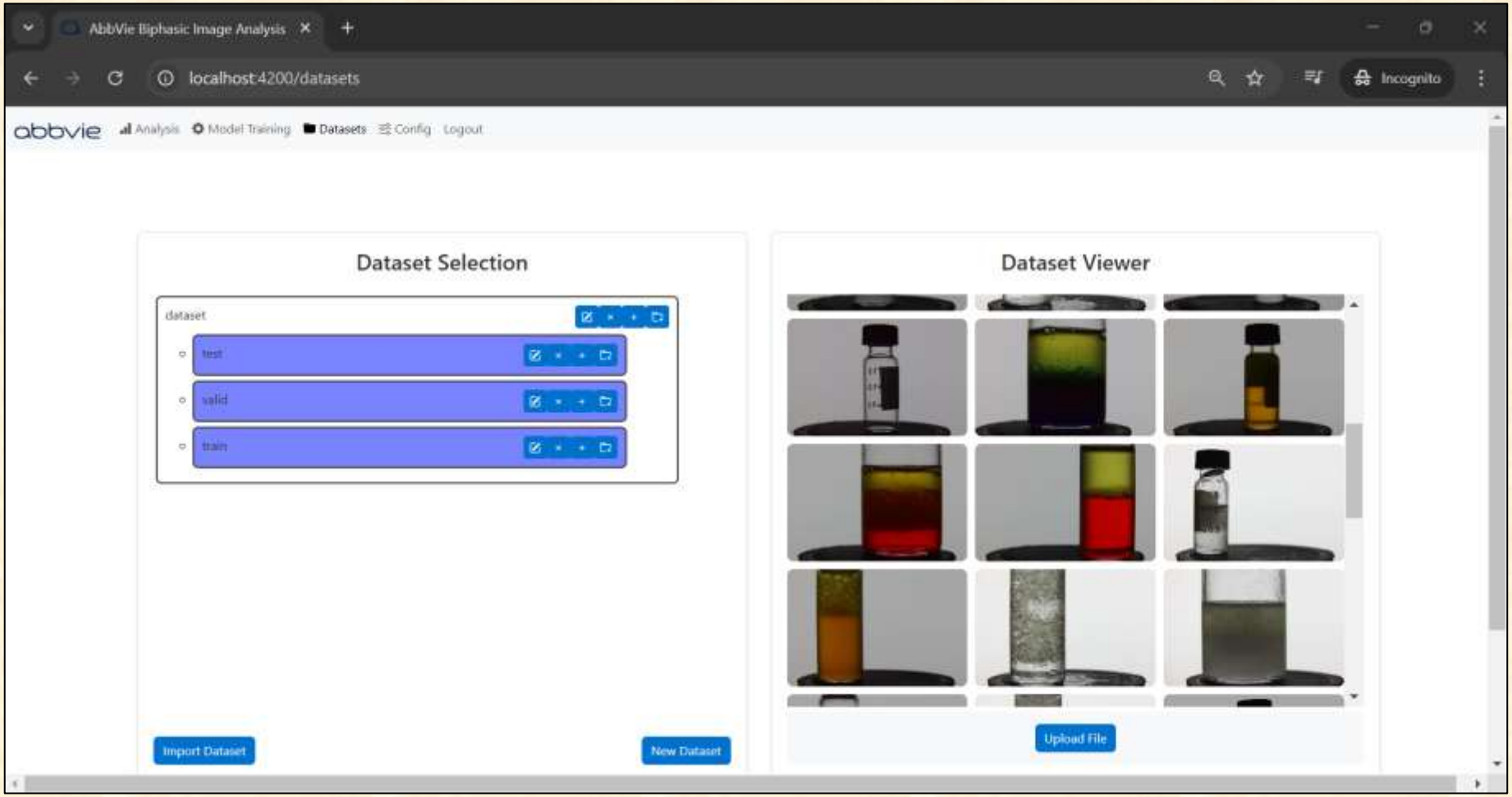
Analysis Page



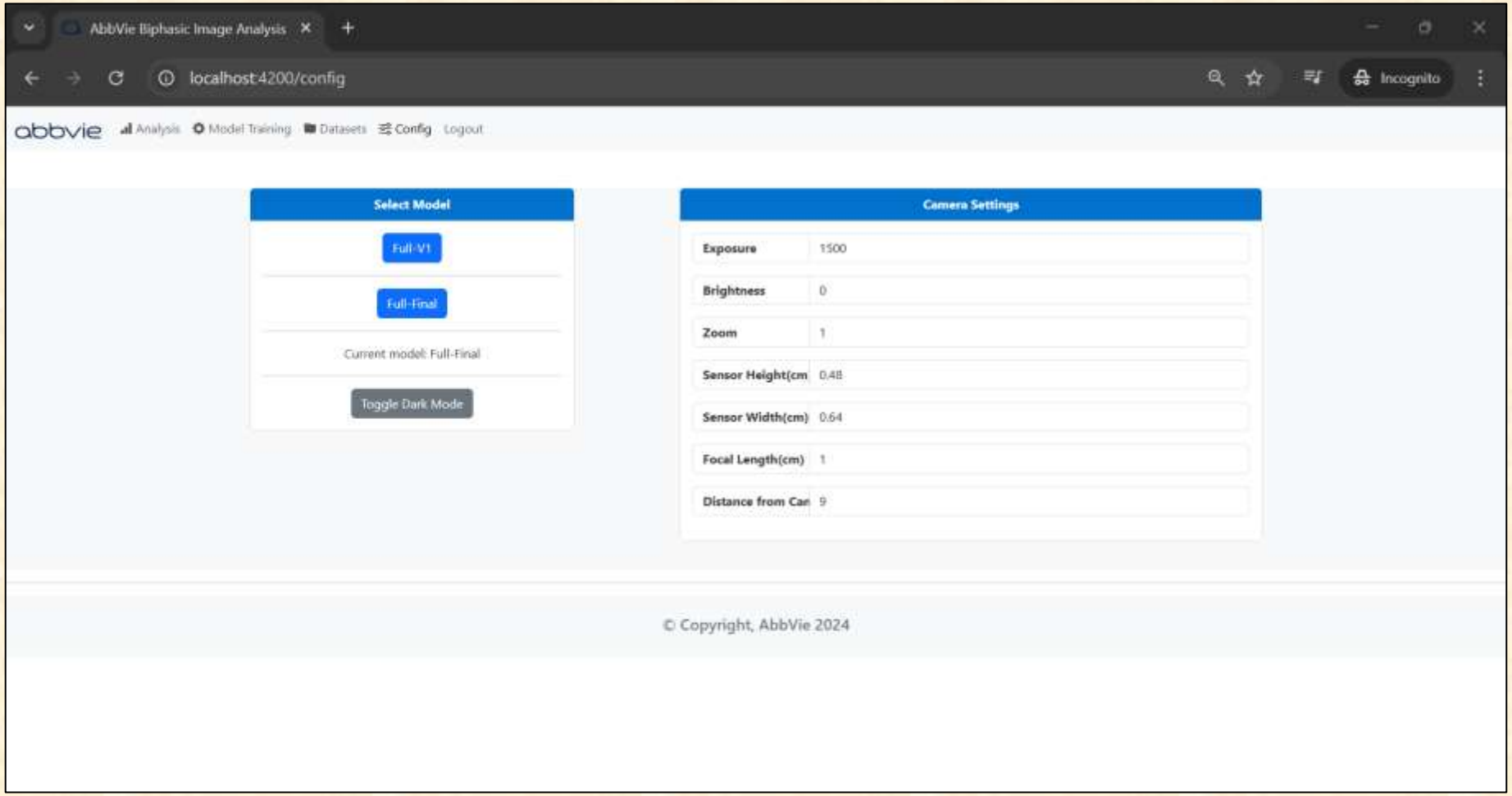
Retraining Page



Datasets Page



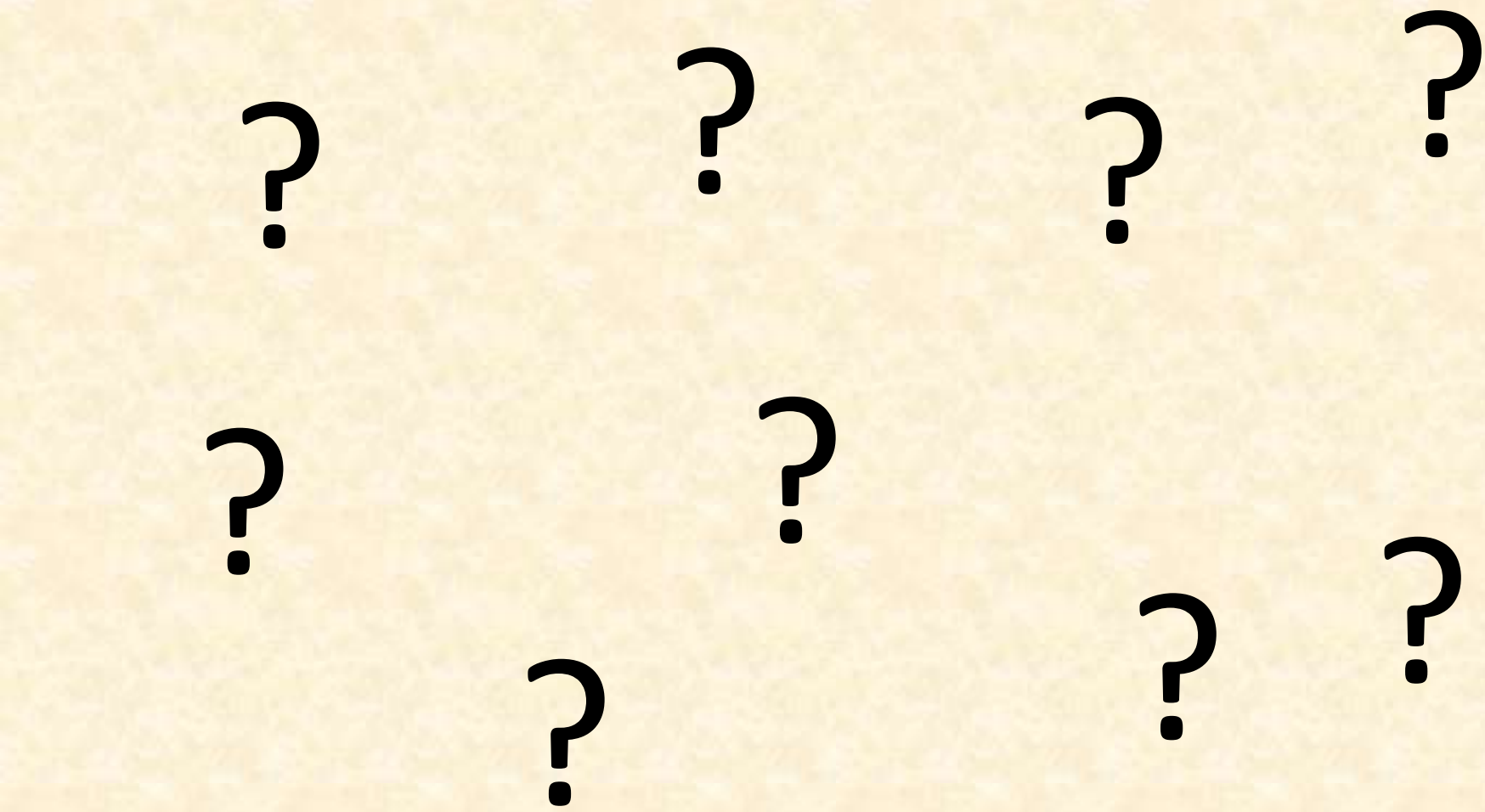
Configuration Page



What's left to do?

- Final Tasks
  - Presentation to AbbVie
  - Various Bug Fixes
  - Software Testing + Updating Documentation
  - Refactoring Code + Stylistic Edits
  - Turbidity Scaling – Waiting for Turbidity Sensor

Questions?



Model Statistics

- Emulsification:
  - 87.1% Accuracy
  - 0.889 F1 Score: $\frac{TP}{TP+\frac{1}{2}(FP+FN)}$
- Volumes:
  - 0.447 mL, Average Error: $|actual - expected|$