BioPath

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Goal: Create an interactive learning tool to help students learn the metabolic pathways

Problem: Lack of quality interactive tools present in the biochemistry teaching community.

Requirements: To provide a platform on which educators can build interactive simulations of various pathways to improve learning and data retention for their students

Original MVP(Minimum Viable Product)

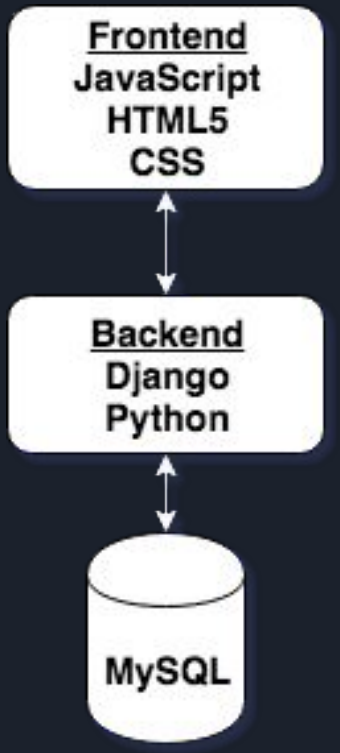
- Model a biochemical pathway
- Show/Adjust flow of molecules through model
- Save for later use
- Allow administrators to share models
- Error checking of Glycolysis
- Allow editing and viewing of models
- Users can create custom models

Changes made to the original MVP

- User’s can no longer create custom models, can only view/create models added by admin
- No frontend UI to add new models -> models are added directly to database(csv file)
- Error checking supported for all models, not just Glycolysis

Demo

System Architecture



Testing

- Usability/System Testing with volunteers
  - Tested by peers, sponsor, and students
  - In person and remotely
  - Used interviews and questionnaires for feedback
- Usability/System Testing with team
  - Tested our own software
  - Developed use cases for different users and tested for bugs/issues
  - Compatibility with different devices

Product delivery

- GitHub
  - All software is on GitHub
  - Documentation
  - Future suggestions
  - Administrator instructions

Lessons Learned

- Collaboration is key, meet often from the beginning
- Communicate tasks clearly, avoid duplication of work
- Test early, develop unit tests early

Questions?