BEEPRINT

An insect analysis software for biology reasearch aimed to merge multiple analyses in a single platform for more convenient use

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PROBLEM

- Research of bees is an alarming subject in biology due to many reasons such as pesticides and climate change.
- Even though the effort, biologists are having a hard time conducting experiments on bees due to the inconvenience of research tools .
- Research tools currently in use are either challenging, outdated or exclusive to certain platforms.
- Requirement of various tools and work environment hinders the research process thus hinders the ecosystem's survival.

SOLUTION

- A comprehensive web-service for biologists to make preparations and conduct various experiments with ease.
- Bundling the most used analysis methods in biology research with state-of-the-art computational tools, offering users a sophisticated experience.
- With options of visualizing the data, users can see their experiment results with minimal effort and optimal accuracy.
- Following a modular design, there is space to add experiments and extend the analysis methods to keep the service up-to-date.

FEATURES

- Automation and analysis of four (or five) important experiments of insect biology.
- Video correction of wide lens video recordings to improve accuracy of analysis.
- Unique ID tag printing and tracking for tagging and tracking bees.
- Automated arduino script generation for electrical grid experiments.
- Convenient use for most used statistical analysis methods such as MESA.
- Modularity and future expandability for additional features and experiments.

NumPy django React SQLite ARDUINO OpenCV PyTorch