HAWK MOUNTAIN BIRD MIGRATION DATA VISUALIZATION: TRANSITIONING FROM PROCESSING TO P5.JS

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ABSTRACT

This poster represents a project on the conversion of a Processing (Java-based) application visualizing raptor migration patterns over Hawk Mountain into a web-compatible format using p5.js (JavaScript Library). Originating from a project developed by previous Kutztown University students to visualize bird migration habits over 20 years at Hawk Mountain, a local bird observatory, the original Processing project/code aimed to enhance educational and research accessibility to individuals online by transforming extensive amounts of data into an interactive, web-based application. The methodology involved converting data from .CSV to .JSON format, thus making it readable by p5.js, and integrating it utilizing a majority of the existing logic from the original Processing code. Despite successfully translating the mathematical functions and partially implementing visualization capabilities, challenges such as incomplete functionalities for displaying bird images on screen were encountered. This project underscores the potential of merging technology with ecological research to create dynamic, educational tools, highlighting the importance of ongoing development in addressing cross-compatibility and visualization issues between different coding languages, libraries, and interpreters.