**EBP Dashboard Development**

**Overview**

I led the design and implementation of a web application that provides centralized access to genomics metadata visualization and project tracking tools. The dashboard serves as a critical resource for researchers, stakeholders and the genomic community to monitor and analyze the progress of EBP and its affiliated projects. The dashboard is live at <https://earthbiogenome.github.io/dashboard/>

**Key Features and Functionality**

1. **Centralized Data Hub**
   * Unified access point for all project metrics including sequencing completion rates, assembly quality, and taxonomic level analysis
   * Real-time progress tracking with automated data synchronization from the Genomes on a Tree (GoaT) database
   * Comprehensive data integration from diverse sources and formats
2. **Interactive Data Visualization**
   * Dynamic charts and graphs with hover effects displaying detailed information on demand
   * Intuitive navigation system and clear information hierarchy for both technical and non-technical users
   * Geographic distribution maps and network relationship diagrams highlighting the global collaboration throughout the EBP community

**Tools and Technologies Used**

1. **Development Framework**
   * HTML5 for semantic structure and accessibility compliance
   * CSS3 for responsive styling, flexible layouts, and smooth animations
   * JavaScript for interactive functionality and dynamic content rendering
   * ECharts library for advance data visualization components and customized charting options
2. **Data Processing**
   * Custom data formatting algorithms to standardize inputs from multiple sources
   * RESTful API integration with built-in project database ensuring data consistency
3. **Deployment**
   * GitHub Pages for hosting the public-facing dashboard
   * Version control through Git with structured branching strategy

**Future Enhancements**

The dashboard is designed with scalability in mind, allowing for:

* Continuous integration workflows for seamless updates and feature rollouts
* Easy addition of new categories and resources as the project expands
* Expansion of interactive features based on user feedback
* Potential integration with backend sequencing databases for deeper analysis

Its modular design and clean architecture ensure maintainability and scalability for future project needs as EBP continues to grow in scope and impact.