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Variant Dashboard

Golden Helix offers data analysis software and predictive analytics used for finding genetic causes of disease and compound screening for drug discovery. They deliver industry-leading bioinformatics solutions for life science research and translational medicine. At present, Golden Helix does not have an interface that represents genomic variant information. The motivation for this project is to improve user experience in interpreting genetic variability through dashboard technology interfaces, thus allowing lab personnel and variant scientists to determine the pertinence of variants for individual patients. To develop the product, we will use an iterative life cycle and implement the Model-View-Controller design pattern, a technique commonly used for front-end desktop and web applications. The dashboard will be developed primarily in JavaScript, HTML, and CSS, with the use of other external tools including Highcharts. The final product will provide a web and desktop interface, displaying content in a web-view, supporting modularity, page resizing, and adaptability across viewing platforms. Users will be able to customize a dashboard according to which variants they would like to observe. Most importantly, the dashboard will interpret data and display it in an intuitive and readable manner. Clear presentation of genetic variability is a difficult problem, and our solution will make it easier for researchers to obtain the information they need rather than searching through raw data files. The dashboard we develop will show data pertinent to the variant and other information required for research and analysis.

Acknowledgements: Megan Weller (MSU Undergrad Student) - Computer Science