Web resource for gene contextualisation

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As part of an ongoing project on the FDR control of Gene-regulatory networks, we aim to provide a gene based web resource to quickly query the context of a gene in tissues. The project will entail creating a web site for an existing set of FDR controlled gene interactions. Results will be largely precomputed but efficient query and visualisation of the data is required. The visualizations and data representations will be based on individual genes or groups of genes.

The project will be designed in such a way that a gene context is extendable to other information such as disease, cell types, etc. which requires designing an extendable data representation/ schema.

A standard python-based or js software stack will be used for the development of the application. All components will need to run in a dockerized environment and be usable by multiple website visitors concurrently. The deliverable of the project is a web-service deployable on our web server for community use.

Requirements:
- Excellent python skills
- Database management
- UX
- Docker
- Documentation
- CI/CD (willingness to learn)

Number of project participants: 1