UiT
THE ARCTIC
UNIVERSITY
OF NORWAY

Kvik: Interactive exploration of multi-omics data from the NOWAC postgenome biobank

Bjørn Fjukstad
Ph. D. Student
Department of Computer Science
bjorn@cs.uit.no

UNIVERSITY OF TROMSØ

Project Advisors and Collaborators

Associate Professor **Lars Ailo Bongo**, Department of Computer Science

Professor **Eiliv Lund**, Department of Community Medicine

Mie Jareid and **Karina Standahl Olsen**, Department of Community Medicine

Kvik

Integrates state of the art **pathway maps** from the KEGG database and **gene expression data** from the NOWAC postgenome biobank in a single system

Kvik is a web app, so you can access it anywhere

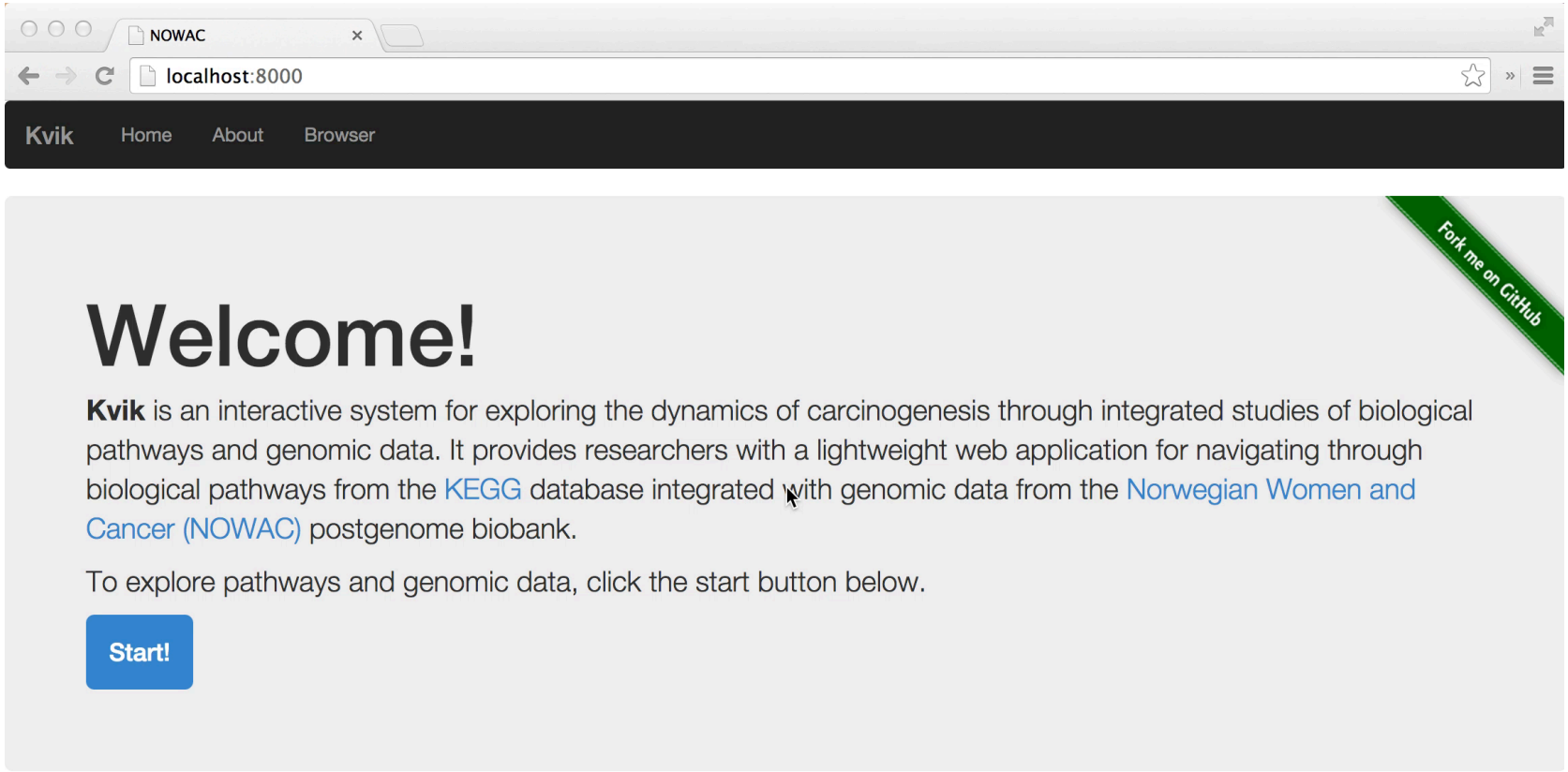
Kvik

Does not require any installation or plug-ins. Runs directly in the web browser.

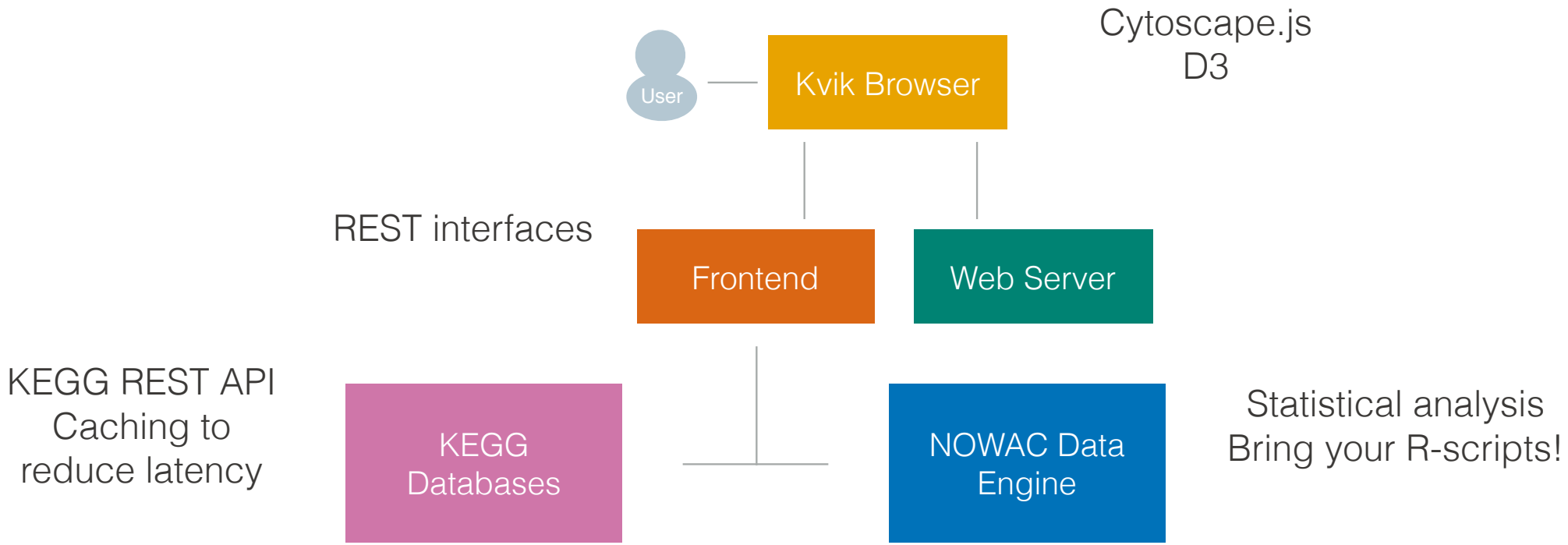
Uses the expert drawn pathway images from KEGG.

Has an extendible backend implemented in R, managing datasets on its own

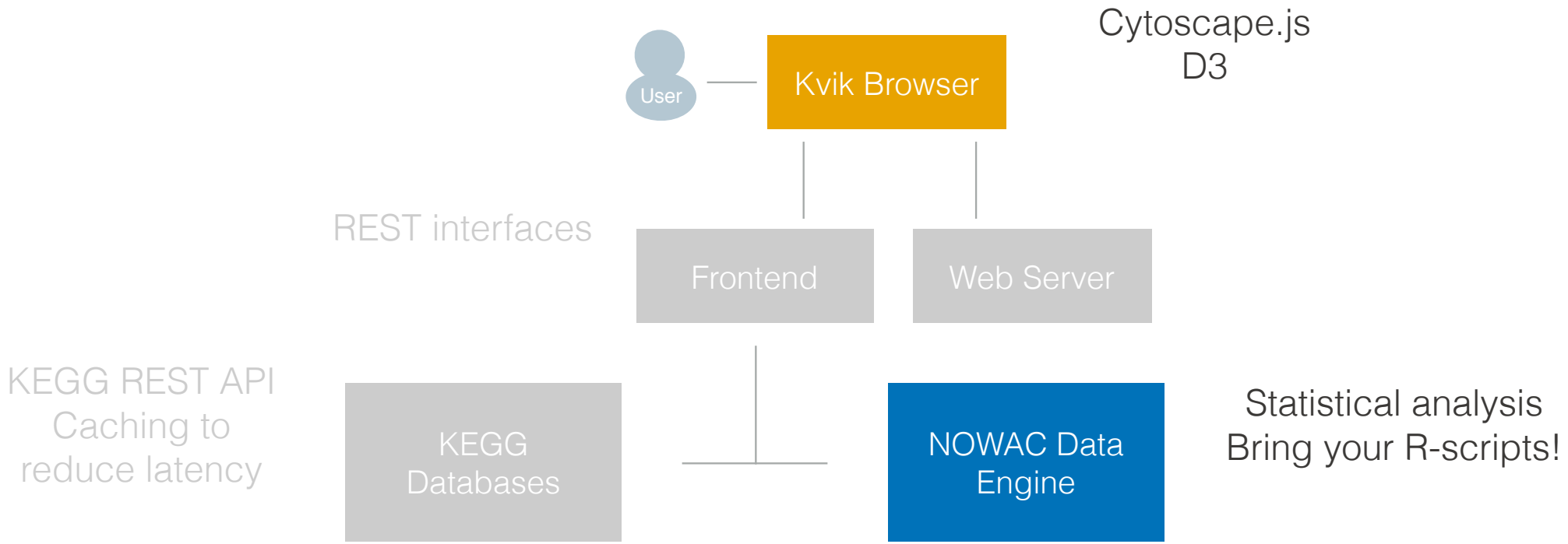
Demo


NOWAC
localhost:8000
Kvik
Home
About
Browser
Fork me on GitHub
Welcome!
Kvik is an interactive system for exploring the dynamics of carcinogenesis through integrated studies of biological pathways and genomic data. It provides researchers with a lightweight web application for navigating through biological pathways from the KEGG database integrated with genomic data from the Norwegian Women and Cancer (NOWAC) postgenome biobank.
To explore pathways and genomic data, click the start button below.
Start!

System Architecture



System Architecture



Future Work

More advanced statistical analyses through **statistical packages** like Bioconductor

Integrate **new data sources** and **more data** from the NOWAC biobank.

Making it accessible to you guys!

The Tromsø Large Display Wall

A 22 megapixel back-projected display composed of 28 tiled projectors. Projectors driven by a 28-node display cluster.

Concluding Remarks

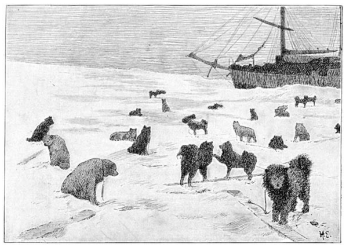
Kvik visualizes biological pathways from KEGG and gene expression data from the NOWAC biobank

Open-sourced at github.com/fjukstad/kvik

UiT
THE ARCTIC
UNIVERSITY
OF NORWAY

Thank you!

Bjørn Fjukstad
bjorn@cs.uit.no



Kvik — Lead sled dog on Fridtjof Nansen's Fram expedition

UNIVERSITY OF TROMSØ