

Zdenek Hynek

Full-stack developer

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Zdenek is a full-stack developer with 10 years of experience in developing innovative and data-rich websites, platforms and digital products. He works at the intersection of data and tech, strives to make complicated things simple and enjoys deleting old code.

During his career, Zdenek has co-founded a data-design studio, worked as a lead developer at Signal Noise and been a research assistant at Oxford University.

He runs [Visualising Data London](#), hosts [Intro to AI workshop](#), team leads design sprints at [Data4Change](#) and occasionally writes and speaks about his work.

Zdenek holds MSc in Cartography and can operate balloons in a high-pressure environment.



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EXPERIENCE

CONTRACTOR NOVEMBER 2018 - NOW
Archax - Full-stack developer
Data4Change - Head of development
RedSift - Full-stack developer

SIGNAL NOISE FEB 2016 - NOV 2018
Full-stack developer
Leading development work on agency projects

OXFORD UNIVERSITY MAY 2015 - FEB 2016
Research Assitant
Development of a chart building tool

GEOGRAPHICS NOV 2008 - NOV 2015
Co-founder and full-stack developer
Leading business and web development

SYMBIO DIGITAL NOV 2010 - AUG 2012
Flash Developer
Developing 3d games and experiences

SKILLS

FRONTEND
Javascript ES6/7, Typescript, React, Redux, d3.js, SVG, canvas, WebGL, Mocha, Chai, Webpack

BACKEND
Python, Django, Node.js, Express, PHP, Mysql, Postgres, MongoDB

DEVOPS
Docker, AWS, Heroku

DATA SCIENCE
Basics of Tensorflow.js, ml5.js, Pandas, Numpy and Scipy

TOOLS
Adobe CC, Sketch, QGis

EDUCATION

DATA SCIENCE INTENSIVE MAR - JUN 2017
Springboard
An online course covering the basics of data science in Python

MASTER OF SCIENCE 2006 - 2011
Masaryk University
MSc in Cartography with exchange stays at the University of Arizona and École Normale Supérieure de Lyon.

AWARDS


- [KANTAR - Information Is Beautiful Awards 2018](#)
- [On Think Tanks - data viz competition, Jan 2014](#)
- [The FWA Mobile of the day, Oct 2013](#)
- [The FWA Site of the Day Award from 3th May 2013](#)
- [The FWA Site of the Day Award, 10th January 2012](#)

Selected work

Reimagine the Game

 reimaginethethegame.economist.com

 Static microsite

 Javascript, WebGL, React, D3.js, React Static, Tensorflow.js, Node.js, FFmpeg

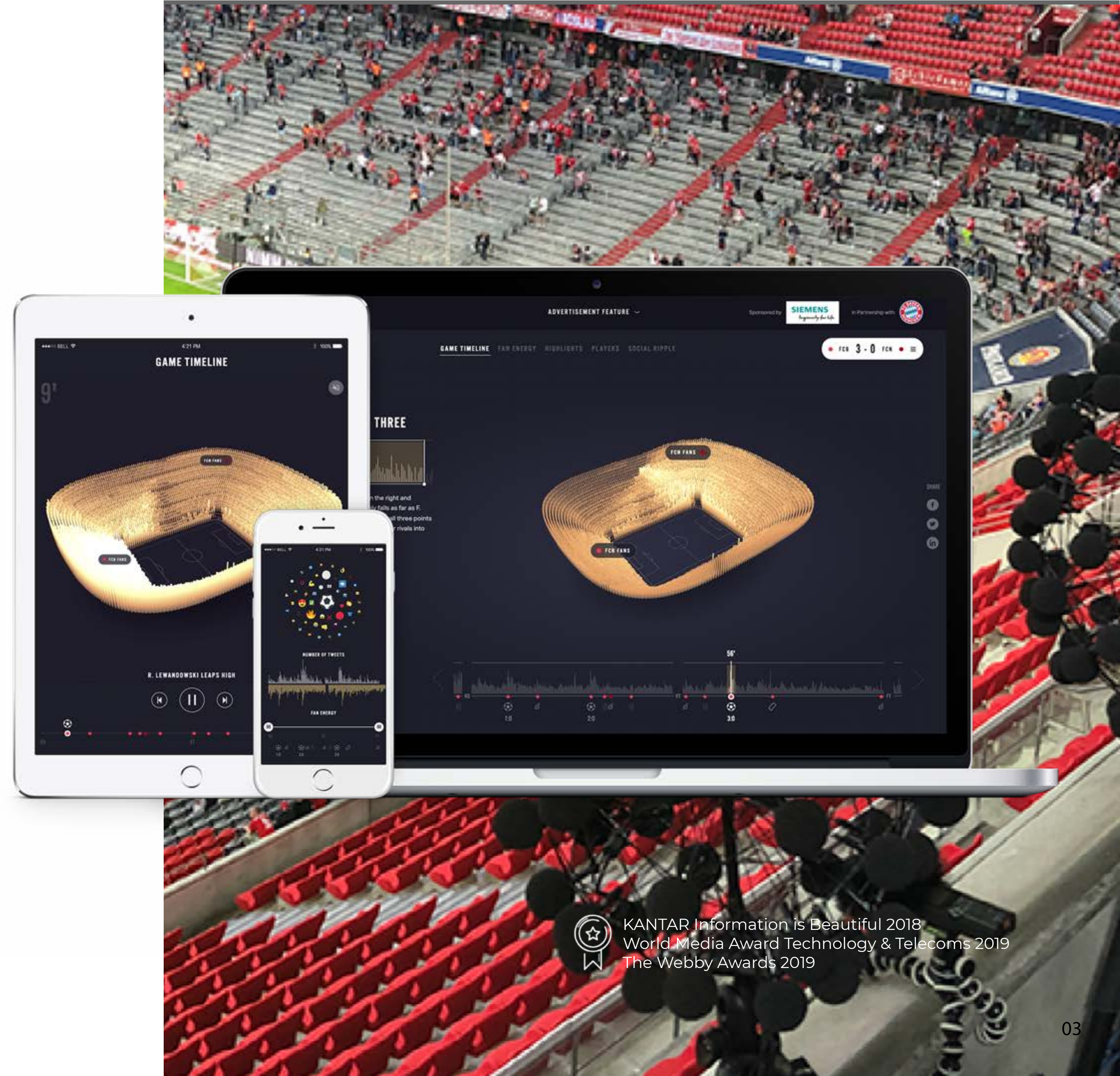
A data-driven microsite telling a story of FC Bayern matches with thousands of data points captured within key moments in the game.

Role

One of the lead developers. Designing overall architecture, developing data-processing pipelines and bespoke visualisations.

Key challenges

- Collaborating with audio engineers on designing a bespoke pipeline for 3d audio processing.
- Training a machine learning model for digit recognition in a video.
- Design processes and developing tooling which would enable curation and processing of data during and after the game.
- Developing a large amount of flexible visualisations allowing for quick prototyping.
- Ensuring functionality of audio players and WebGL visualisation across all target browsers and devices.



Selected work

Uproar Tools

 tools.uproar.fyi

 Digital product

 Django, Python, Selenium, Postgres, Elastic Beanstalk, React, D3.js, Javascript

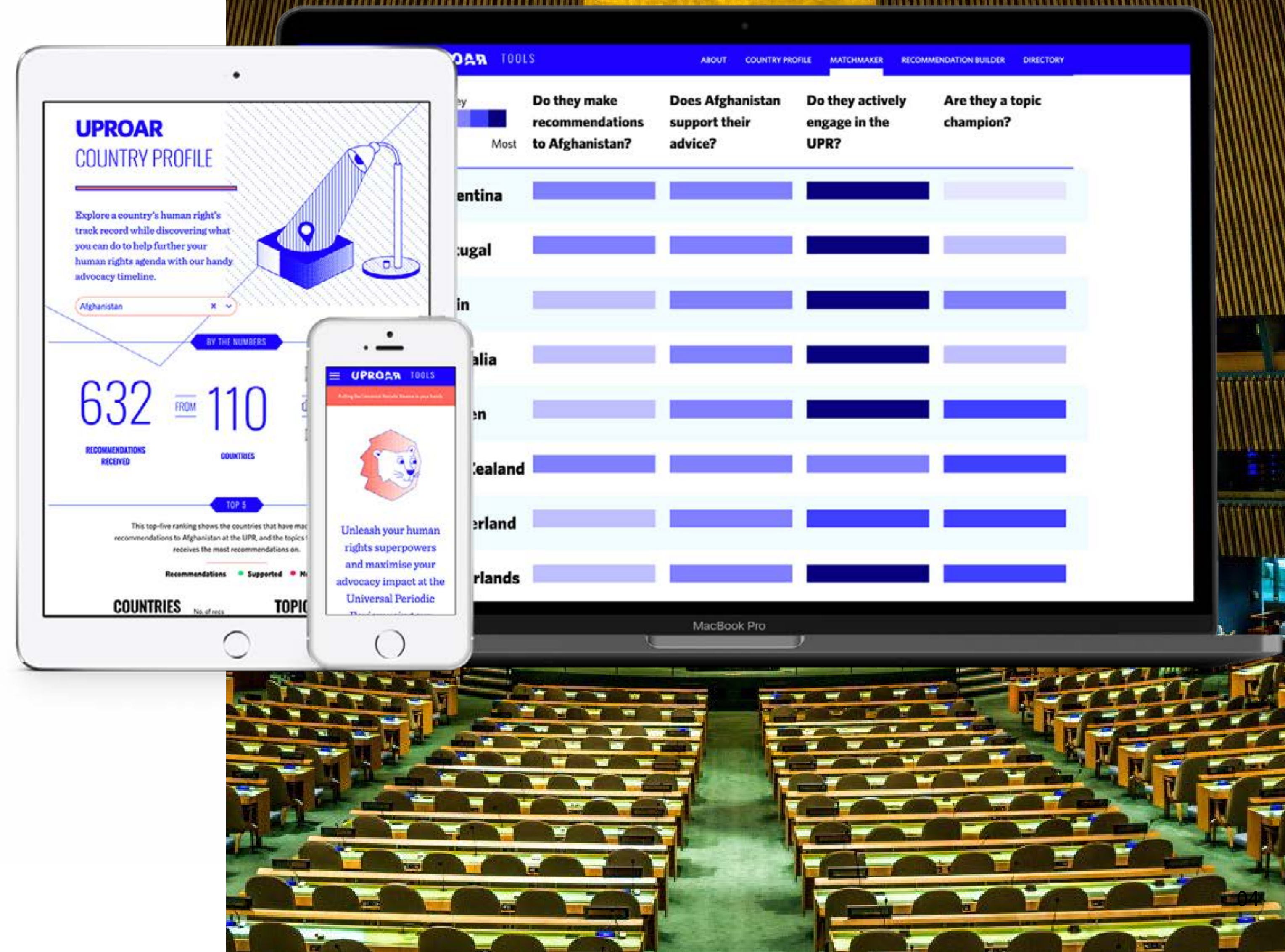
A digital tool to help civil society advocate and lobby for digital rights at the United Nations.

Role

Full-stack developer building up the Django backend, Selenium scrapers and React apps for front-end.

Key challenges

- Designing ranking algorithm for the best recommendations.
- Requirements gathering, prototyping and user-testing.
- Scraping, parsing and cleaning data from an obsolete website.
- Implementing performant full-text search over 1000s of documents.
- Ensuring complex functionality accessible even on mobile.



Selected work

Engaged and Outraged

 outraged.me

 Interactive installation

 Django, Python, Postgres, WebSockets, React, d3.js, Chrome browser extension

An exhibition installation with AI playing the main character.

Role

Concept creation, leading the cross-disciplinary team and full-stack developer building up the Django backend communicating with React frontend and custom Chrome extensions via web sockets.

Key challenges

- Navigating Youtube page and controlling video playback via chrome extension.
- Designing backend system for snapshot collection and scheduled training.
- Real time communication between an Ipad, several laptops and main visualisation at the exhibition.
- Real time visualisation and analysis of the viewed videos.
- Data analysis of the collected results.




Selected work

Forest Scope

 forestsco.pe.info

 Scrolly-telling microsite

 React, Redux, d3.js, SVG, WebGL

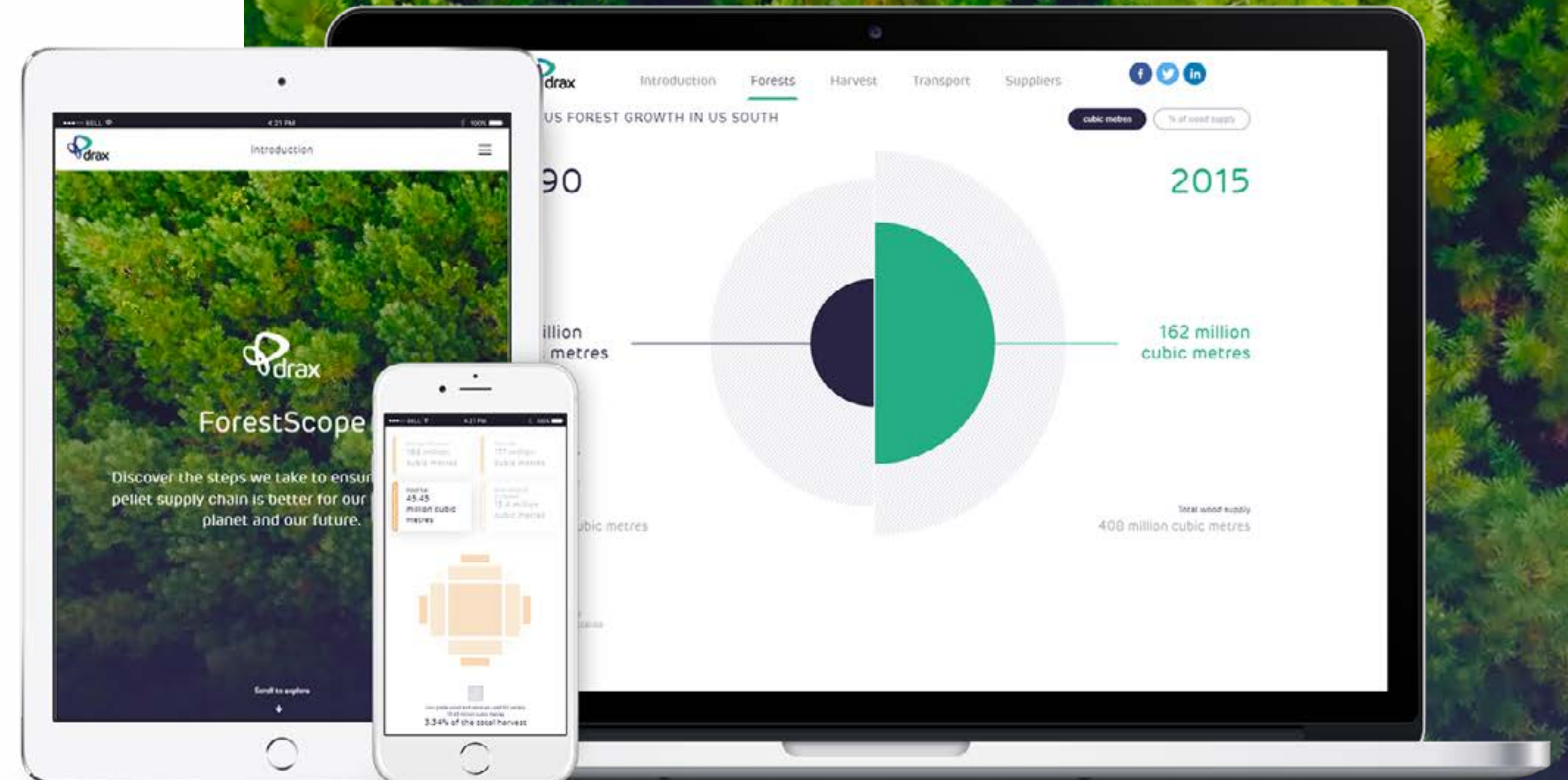
An infographic journey of a wood pallet from Louisiana to Yorkshire.

Role

Lead developer building a responsive website with many bespoke visualisation.

Key challenges

- Coordinating development on the entire team.
- Developing WebGL visualisation with 1000s of data points.
- Developing a large number of bespoke SVG visualisations.
- Controlling state of the visualisations on scroll.
- Ensuring functionality of the SVG and WebGL visualisation on all target devices.



Selected work

Our World in Data

ourworldindata.org/owid-grapher

Chart-building tool

Backbone, d3.js, SVG, PHP, Mysql

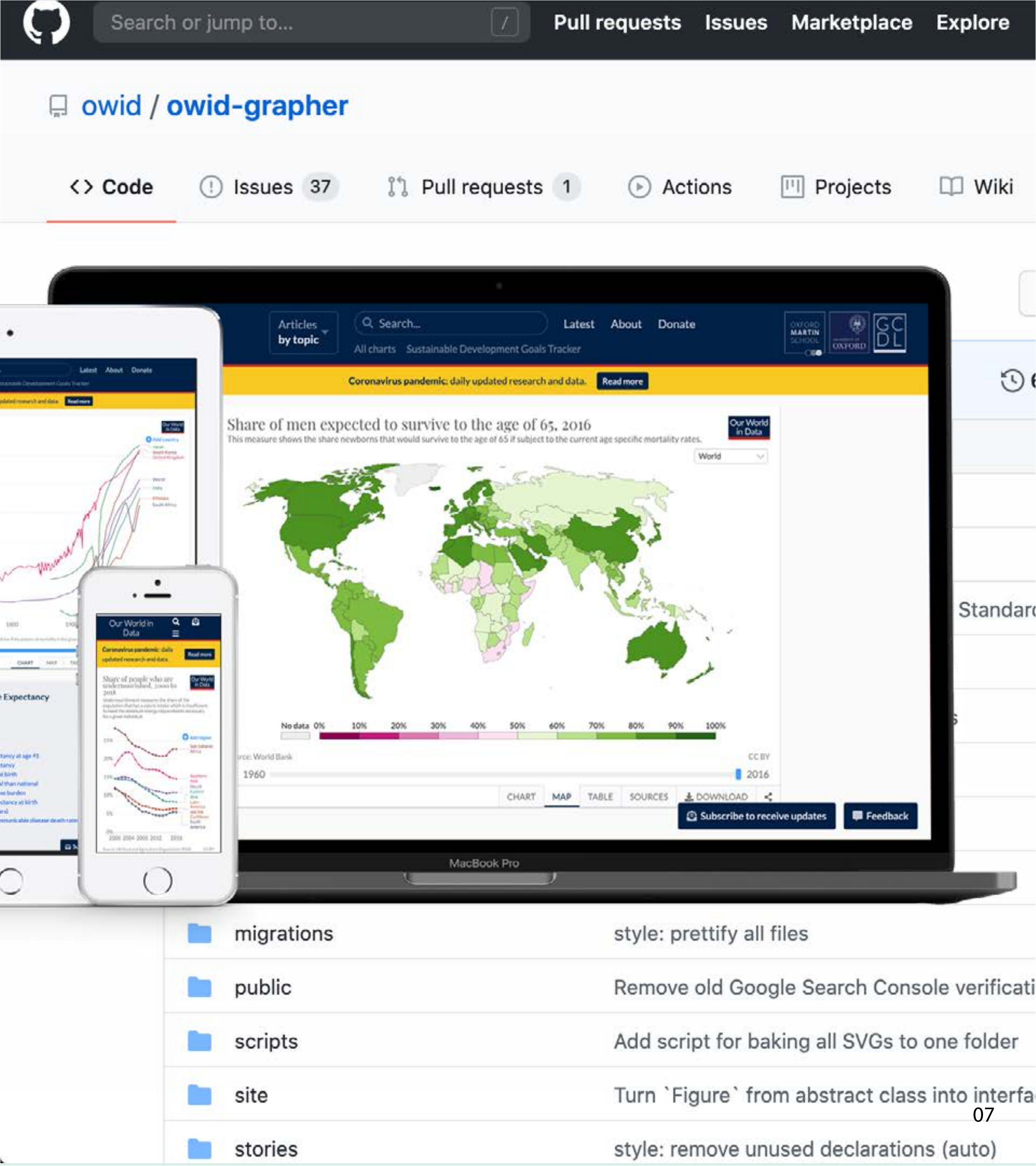
Open-source tool to store tool to store and visualize data.

Role

Lead developer on developing initial versions of hte chart-building tool.

Key challenges

- Requirements gathering and defining a roadmap for the product.
- Design and implementation of a flexible frontend chart component.
- Design and implementation of the user-friendly editor for creating charts.
- Import and validation of tabular data from spreadsheet.
- Architecture of the entire system.



migrations	style: prettify all files
public	Remove old Google Search Console verificati
scripts	Add script for baking all SVGs to one folder
site	Turn `Figure` from abstract class into interfa
stories	style: remove unused declarations (auto)

Selected work

Czech Crime

-  czechcrime.org
-  Interactive map
-  Backbone, d3.js, Google Maps, Python, PHP, MySQL

Visualizing crime data in the Czech Republic.

Role

Production lead and main developer building the interactive map, PHP backend and Python data processing scripts..

Key challenges

- Management of the production team and client communication.
- Developing backend for complex querying of the crime data.
- Designing scripts for processing large volumes of spreadsheet data.
- Processing and cleaning of geospatial data.
- Caching and scalability for high volumes during launch.

