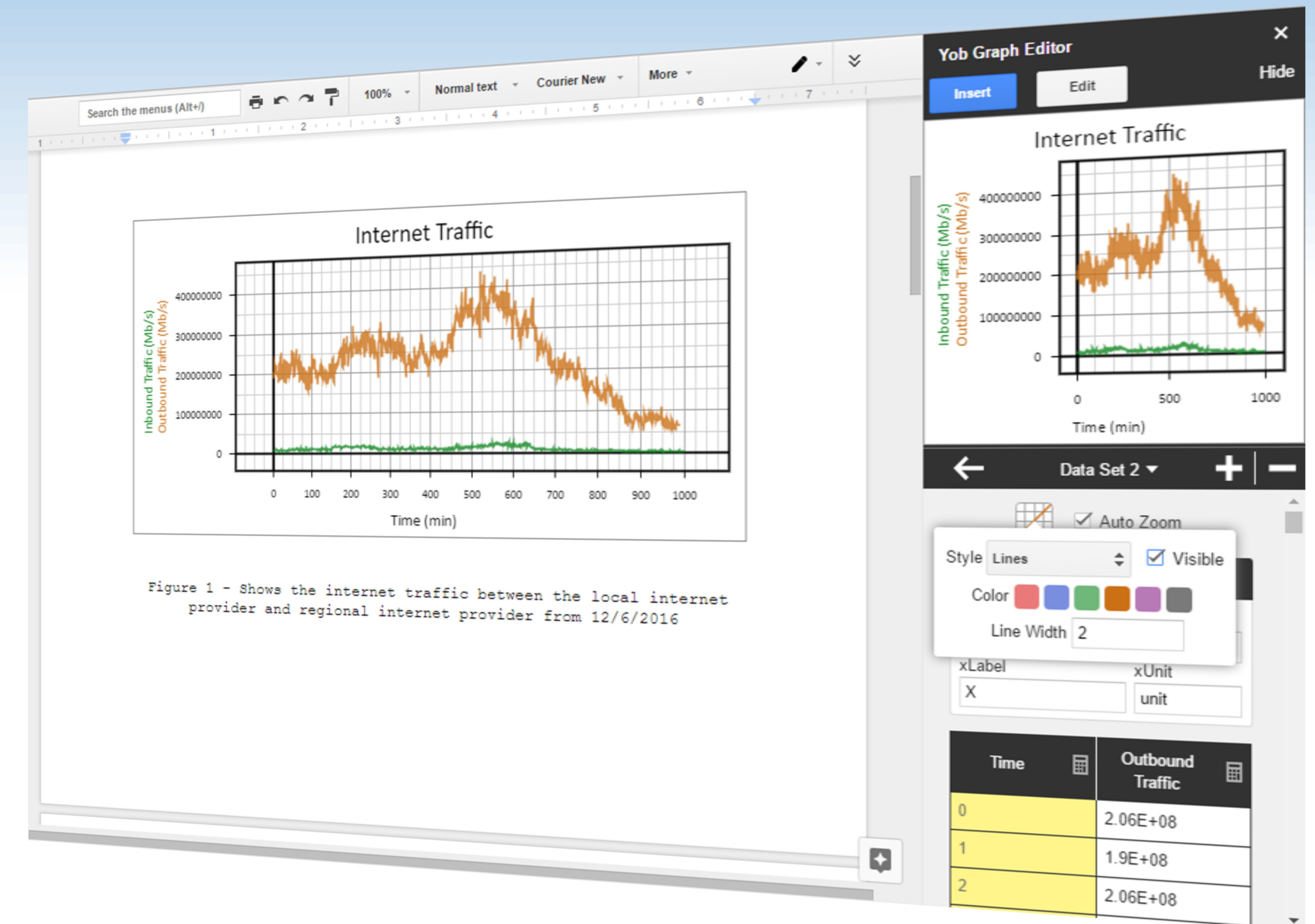# Yob

A graphical analysis add-on for Google Docs
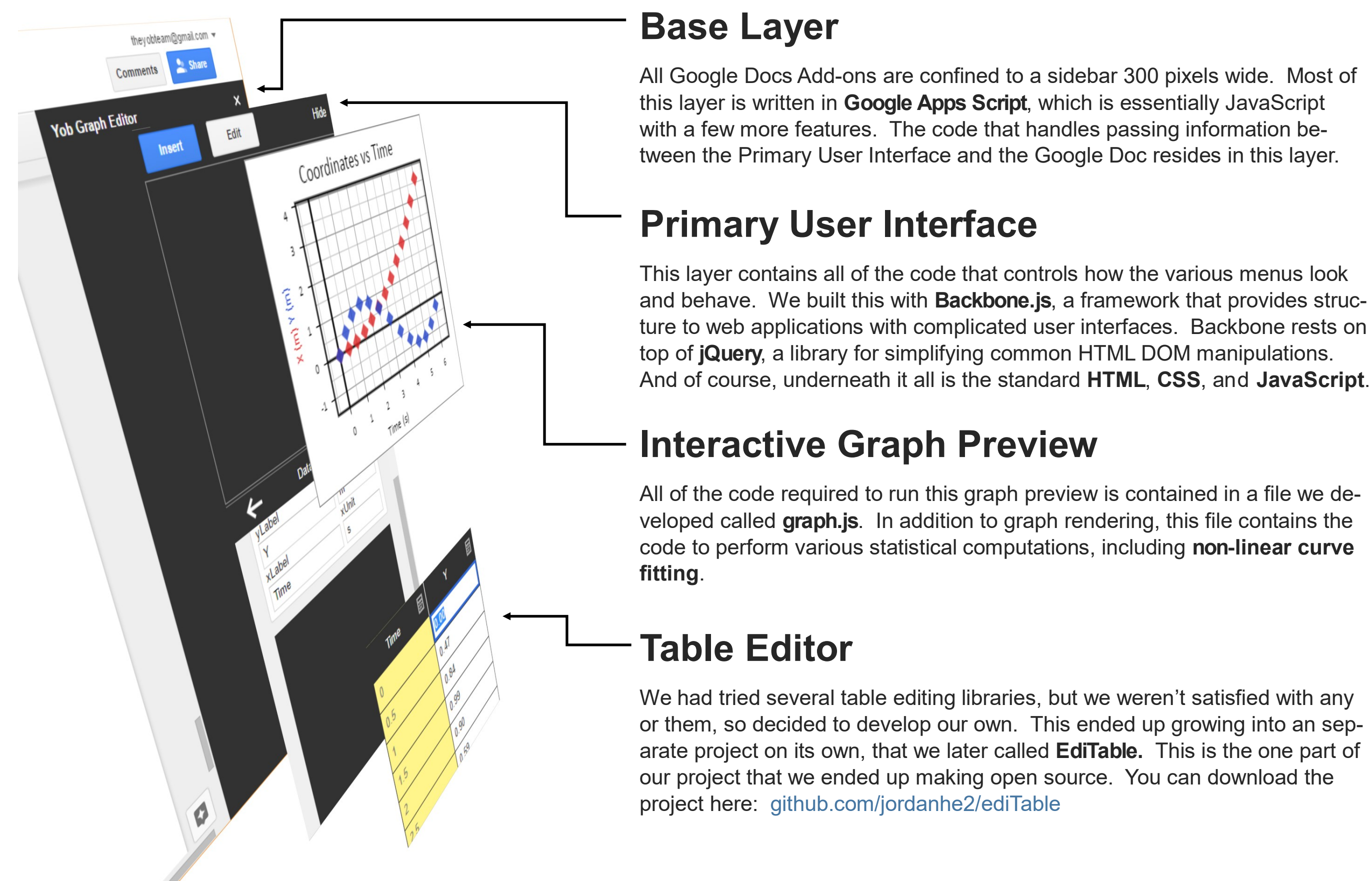
Why use Yob?

There are lots of sophisticated graphing applications out there, so what makes Yob so special?

We specifically designed Yob to be **simple** and **convenient**, with classroom use in mind. Users are able to work on their documents and graphs **within the same window**, and any images created with Yob can shared and **reopened** for further editing.

Interface Breakdown

Base Layer

All Google Docs Add-ons are confined to a sidebar 300 pixels wide. Most of this layer is written in **Google Apps Script**, which is essentially JavaScript with a few more features. The code that handles passing information between the Primary User Interface and the Google Doc resides in this layer.

Primary User Interface

This layer contains all of the code that controls how the various menus look and behave. We built this with **Backbone.js**, a framework that provides structure to web applications with complicated user interfaces. Backbone rests on top of **jQuery**, a library for simplifying common HTML DOM manipulations. And of course, underneath it all is the standard **HTML**, **CSS**, and **JavaScript**.

Interactive Graph Preview

All of the code required to run this graph preview is contained in a file we developed called **graph.js**. In addition to graph rendering, this file contains the code to perform various statistical computations, including **non-linear curve fitting**.

Table Editor

We had tried several table editing libraries, but we weren't satisfied with any or them, so decided to develop our own. This ended up growing into an separate project on its own, that we later called **EdiTable**. This is the one part of our project that we ended up making open source. You can download the project here: github.com/jordanhe2/ediTable

Tools and Workflow

GitHub is a free service for hosting Git repositories. **GitHub Pages** is a related service that allows you to serve Git repositories as a static website. The latter is what we use to host our documentation.

BitBucket is another free service for hosting Git repositories. It doesn't have as many bells and whistles as Github, but is allows for free **private repositories**, which is something that GitHub does not provide.

The **Chrome Web Store** is where Yob is set to be published. This is where users can go to install our product.

GitHub

BitBucket

Chrome Web Store

Cloud Based

Local

MkDocs is a tool for quickly building static documentation websites. You feed it **markdown files** and it will spit out a fully functional website, complete with navigation bars and searching capabilities. This is the tool we used to build our documentation.

Git is a popular **version control system**. We use Git to manage our local code repositories, which are then synced up to an external hosting service like **GitHub** or **BitBucket**. Working this way is essential for distance collaboration, and for code security.

Brackets is an open source code editor designed for web development. I can't speak for my co-developer, but I use this to do all of my text editing for code and documentation.

The **Node Package Manager** is a command-line tool that runs on top of **Node.js**. **NPM** is useful for many things, but we primarily use it to **manage project dependencies** (e.g. jQuery, Backbone), and to **automate our build processes** (e.g. concatenate and minify JS files).

Git

Git

MkDocs

Documentation

Brackets

Source Code

Node + npm