



The Server-side JavaScript

Joreen Arigye

Get to know me

Joreen Arigye

- Data Analyst at Fenix International
- BSc in Software Engineering from Makerere
- Msc in I.T majoring in Software Engineering and Data Science from CMU
- Interested in academic research, women in Tech among a few things
- Hobbies: hand crafting, word games, reading up on stuff, discovering new music, good conversations over drinks, and just chilling

Set Class Expectations

- Offering facilitation for Node.js+TDD for 4 weeks
 - High level introductory knowledge
 - First 3 weeks, offer course content while building a small web app
 - Fourth week, have groups build and demo their web apps
- Class participation is important
- **Always ask !** - only way we can know how to help
- Read and research widely, let's teach each other
- Make sure to do your own work, can only get better with hands on experience
- I expect mutual respect from the class, what do you expect?

Now what is Node.Js?

- Basically it's :
 - an environment to run JavaScript outside the browser
 - an open-source runtime (an executable)
 - So if you're writing code in bash you're in a bash runtime. If you're writing code in Ruby, you're in the Ruby runtime. So this is like it's own runtime, it's its own environment that's self-encapsulated, you don't have to do anything.
 - built on Chrome's V8 JavaScript engine.
 - It was created by Ryan Dhal in 2009.

Why should we care about it?

- Extremely fast:
- I/O is Asynchronous and Event Driven: All APIs of Node.js library are asynchronous i.e. non-blocking.
- Single threaded.
- Highly Scalable: Node.js is highly scalable because event mechanism helps the server to respond in a non-blocking way.
- No buffering: Node.js cuts down the overall processing time while uploading audio and video files. Node.js applications never buffer any data. These applications simply output the data in chunks.
- Open source: Node.js has an open source community which has produced many excellent modules to add additional capabilities to Node.js applications.

What apps have been built with Node?



What Can Node.js Do?

- Node.js can generate dynamic page content
- Node.js can create, open, read, write, delete, and close files on the server
- Node.js can collect form data
- Node.js can add, delete, modify data in your database

Required installations for the class!

1. Download latest node version from: <https://nodejs.org/en/>
 - a. Type ``node -v`` to see what version you have installed
2. You can use a familiar code editor, I recommend VS code.
 - a. Find appropriate version: <https://code.visualstudio.com/docs/setup/setup-overview>
3. Download MongoDB: Follow the prompts
<https://docs.mongodb.com/manual/tutorial/install-mongodb-on-windows/>

'Hello World'

To test that everything is running fine:

- Create a folder for your project
- Navigate into it run the npm init command
 - It creates a package.json file which help manage dependencies that we install later
- Create a file called server.js
 - we want to make sure it's running properly. To do so, simply write a console.log statement in server.js (`console.log('everything is running fine')`)
 - run node server.js to see `'everything is running fine'` on your terminal
 -
- first have to install Express
-