

Matthew Barber

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PROFILE

I'm a BSc Computer Science graduate experienced in developing web applications, able to exercise the MVVM pattern for a Vue.js and Node.js stack. I can design sensible database schemas and can write optimised queries for a variety of SQL/NoSQL stores. I know how to specify visualisation grammars and can meet more bespoke presentation needs where appropriate. I work efficiently alone, being a disciplined and resourceful individual always eager to improve my craft. I enjoy working with and learning from my peers, able to communicate my own ideas succinctly.

PROJECTS

YoYo Games Sandbox Archive

Flask site to search for games of a shutdown games portal, querying a Sqlite store which holds game downloads and metadata. The store was procured from an existing WARC collection which was replayed and subsequently scraped.

Aston Events Site Coursework

Node.js site for students to manage events. Uses Express for routing, Pug for templating, and MongoDB with Mongoose for data storage.

Financial Analysis Stack Coursework

Python application that creates linear regression models of stock market histories. Demonstrates how to build applications with distributed data via Hive on HDFS, and how to utilise parallel processing with Spark. Chart.js visualisations are available when the models are created. All services are initialised as Docker containers.

coinflip

Python library for assuring cryptographic randomness in RNGs. Where appropriate, results include Vega-Lite visualisations of test data such as Fourier transforms and random walks.

Recursive GZIP Bomb Tutorial

Comprehensive primer on the file format and compression algorithm theory involved in creating compressed file quines (i.e. extracts to an exact copy of itself, ad infinitum). Self-referential checksum was brute-forced by a multiprocessing Python script ran on a Google Cloud Platform VM.

EXPERIENCE

Ferndale Homeless Shelter Volunteer

Nov. 2015–April 2019

Starbucks Barista

Sep. 2018–Feb. 2019

OTS Homeless Shelter Volunteer

Sep. 2018–Feb. 2019

Adventure Island Theme Park Host

July 2017–Sep. 2018






EDUCATION

Aston University

Sep. 2016–July 2020

1st (Honours) BSc Computer Science

FIND ME ONLINE

 github.com/Honno
 kaggle.com/justhonno
 pypi.org/user/Honno
 matthewbarber.io
 blog.matthewbarber.io

LANGUAGES

JavaScript
SQL
Python
Bash
Java
C

WEB STACK

Node.js
Flask
Sqlite
MongoDB
Vue.js
Pug
Jinja
Vega-Lite
Chart.js
Jekyll
jQuery
SASS

TOOLS

Git
SSH
Docker
Jupyter
pre-commit
GitHub Actions
TravisCI
AppVeyor