CONNOR BARKER

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Experience

Software Developer | Konrad Group

September - December 2018

- Created pages for a web app built in React 16, using new features such as contexts to make data persistent between pages, new lifecycle methods to increase efficiency, and custom DOM attributes to make the app more modular
- Designed highly unit-testable components by allowing them to be tested both as black boxes and as part of the system as a whole, using Enzyme and Jest for unit testing and Puppeteer for end-to-end testing
- Wrote scripts in Bash and Python to accomplish tasks such as restructuring translation files, creating new Yarn commands to make unit testing more efficient, and controlling the end-to-end testing process with Puppeteer
- Responsible for mobile development fixes, creating responsive elements, and cross-browser compatibility

Fullstack Developer | UWaterloo Portal Team

January - April 2018

- Developed an MVC ASP.NET analytics application to display usage data, designed the front-end and back-end components from scratch using JavaScript, Bootstrap, and Ionic for the front-end, and C# and SQL for the back-end
- Responsible for the visual redesign of the student/staff views in the new co-op interview center paging system, as well as adding new functionality such as editing interview times and messaging students using AngularJS, C#, and SQL
- Parsed user data from approx. 15,000 students before returning the resulting information through a RESTful API and displaying it via graphs in a web app which allowed users to rearrange and filter the data by hitting the endpoint again

Projects

ASCIIfy

JavaScript, jQuery, HTML, macOS, Bash, Git, Chromium, Chrome extension framework

- Chrome extension which makes use of jQuery to search for images on a webpage and convert them into ASCII art
- Parses pixel data and finds average color values, assigning them to ASCII characters and placing them on the page
- Circumvents cross-origin security restrictions by recreating the images locally, then manually setting their origins
- Blocks of text produced replace images on webpage without changing layout, and can be copied/pasted elsewhere

AMSAT

JavaScript, Natural Language Processing, node.js, Heroku, RESTful/Streaming Twitter API, macOS, Bash, Git

- Created a Twitter bot in JavaScript, using node.js and assorted libraries, which creates Tweets automatically
- NLP string generator was custom-built to create tweets, and uses Markov chains to parse large quantities of text
- Makes efficient use of RESTful and streaming Twitter APIs to completely automate the bot (hosted on Heroku)

laz0rb0i

C++, MIPS, Linux (Ubuntu), Omega2 (microcontroller), Bash, SSH, VirtualBox

- Integrated system which converts user input into a visual laser display with motors and mirrors, projected on a wall
- Wrote a custom CLI using C++, compiled for MIPS using a virtual machine running Linux, to control the motors
- Program continuously accepts, processes , and converts user input into GPIO output with a purpose-made algorithm

Education

University of Waterloo

Candidate for Bachelor Of Applied Science in Honours Computer Engineering
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