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 the latest WC3 web accessibility standards such as ARIA tags
- Designed unit-testable, stateful components using Enzyme and Jest, increasing overall test coverage by 110%
- Developed key features such as a PDF viewer, custom input fields and radios, and a progress tracker
- Wrote Yarn commands to automate end-to-end and integration testing with Puppeteer and Chromium

Fullstack Developer | UWaterloo Portal Team

January - April 2018

- Developed an MVC ASP.NET analytics tool using C#, SQL, Ionic, and Angular to display student app usage data
- Optimized data processing using a SQL abstraction layer and sorting algorithms, reducing API response time by 75%
- Responsible for developing the new UWaterloo interview paging system, allowing students to check in from their phones and letting staff update interview times/locations

Projects

ASCIIfy

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

- Chrome extension which uses 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 with JavaScript which retrieves Tweets from users and uses them to generate sentences
- 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 projector with motors and mirrors
- Wrote a custom CLI using C++ to control the motors, compiled for MIPS using a virtual machine running Linux
- Program continuously accepts, processes, and converts user input into GPIO output with a purpose-built algorithm

Education

University of Waterloo

Candidate for Bachelor Of Applied Science in Honours Computer Engineering
Expected 2022 • Waterloo, ON