

MOHAMMED SAHL

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SUMMARY

- Experience with full-stack frameworks, server-side applications, scripting, open source and compilers
- JavaScript, TypeScript, Python, C/C++, Rust, Java; React/Redux, Sails/ExpressJS, Redis, Cypress

EXPERIENCE

Major League Hacking

Software Engineering Fellow

(Remote) Waterloo, ON

May 2020 - August 2020

- Built a RESTful backend server and testing framework for v2 of a JavaScript transpiler
- Developed a word processing document parser and contributed to a spreadsheet data toolkit
- Added E2E tests using Cypress helping validate UI and server requests for a documentation generator plugin

WorkMarket

Quality Engineer

Toronto, ON

May 2019 - August 2019

- Sped build and release pipeline by **25x** by automating repetitive test cases using Espresso
- Developed software test plans for the Android platform increasing case coverage from **62%** to **87%**
- Reduced employee on-boarding times by **4x** by consolidating documentation into a single repository

Brand Lounge

Web Designer

Dubai, UAE

June 2017 - August 2017

- Decreased website load times by 20% by introducing caching into the server of a website with **500+** pages

PROJECTS

Biquadris - C++, Bash

- Programmed a two player Tetris clone with revamped block generation, level difficulty and player abilities
- Devised special actions, triggered by clearing multiple rows allowing user to negatively influence opponent
- Formulated level specific block generation using various software engineering design patterns

Babel-Repl - JavaScript, React, SailsJS, Supertest

- Engineered a sandbox that transpiles code from ES6 to ES5 syntax with custom plugin and config support
- Introduced functionality to save and fork blobs, view AST with syntax highlighting and transpile history
- Implemented backend and testing infra using SailsJS's MVC framework

C-Compiler - C++, Assembly, Bash

- Created a compiler that scans, parses and generates executable files from C source code
- Implemented loops, variable assignment, function definitions, conditional, arithmetic and return statements
- Uses LR(1) NFA parsing to analyse a context-free language and produce derivation for a given string

WordJS - TypeScript, PowerShell

- Architected a word processing document library with **1.1k+** users, **190+** forks **136k+** weekly downloads
- Implemented logarithmic time file type detection by using trie data structure to process file signatures
- Developed a file-type agnostic XML handler to parse through text blocks for unzipped files

UtilBot - Rust, PostgreSQL, diesel

- Built a full-stack discord bot that profiles users and serves bash-like instructions
- Added commands for server members to ask questions and get replies from users matching its characteristics

Auto-Repo-Struct - React, TypeScript, TSX

- Authored a plugin to allow users to visualize, in tree form, repository structures on Github

EDUCATION

University of Waterloo

Honours Bachelor in Computer Science, B.S (Co-op)

Waterloo, ON

September 2018 - April 2023