

William Harvey

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Biomedical Engineering

Option in Management Sciences

github.com/WilliamNHarvey

in/williamnharvey

Technical Skills

Programming Languages

Python	Ruby	Go
JavaScript	Typescript	Coffescript
Bash	Batch	GLSL
C++	C#	Java
MATLAB	R	PHP
Swift	Kotlin	Liquid

Technologies

Rails	Node.js	Jekyll
Mongo	MySQL	Postgres
Vue	Angular	React
S3	SQS	ElasticSearch
Docker	Nginx	Kubernetes
Sinatra	WebGL	Logstash

Strengths

- Architecture design
- Root-cause analysis
- Agile (Scrum, pairing)
- OCR
- Big queries
- System administration

Work Experience

Associate Software Engineer • Doximity • San Francisco

June 2020 – Present

Software Engineering Intern • Autodesk • San Francisco

January 2019 – August 2019

- Created a system for overlaying blueprints, combining them into one image with different shading to identify changes and overlap
 - Researched a resampler and convolution system to improve render quality
 - Created a commit linting and change tracking package for our repositories
- WebGL, React
 - WebGL
 - npm, pre-commit

Software Engineering Intern • Doximity • San Francisco

May 2018 – August 2018

- Developed an internal question & answer extension to Doximity's internal wiki
 - Created an automatic documentation creator, which updates the documentation whenever a new tracking event is committed to master
 - Created internal searching gem to use when searchable datasets may be large
 - Made multiple npm modules, some open-source such as `github-blob-commit`
- Rails, Postgres
 - Node.js, Git, Segment, npm
 - Rails, Algolia
 - Node.js, npm

Software Developer • Ontario Institute for Cancer Research • Toronto

August 2017 – December 2017

- Created and managed a local development environment system which is still used to develop on over 20 Node/Mongo apps
 - Managed data migrations (MySQL to MongoDB) using data maps
 - Performed system administration by making stress tests and managing container proxies on cloud servers
- Docker, Bash, MongoDB, Solr, Node.js
 - Python, MongoDB, MySQL
 - JMeter, Grafana, Nginx, Go, LetsEncrypt, Docker

Full Stack Web and Mobile Developer • Sprout at Work Wellness Solutions • Toronto

January 2017 – April 2017

- Developed an open API backend to allow clients to authenticate with Sprout and store user's personal health data
 - Developed new features on web and a Cordova mobile app
 - Migrated to a new media embedding provider
- PHP, OAuth, MySQL, ElasticSearch, Logstash
 - AngularJS, CodeIgniter, MySQL
 - PHP, embed.ly, iframe.ly

Web Developer • rBux Inc. • Bracebridge

May 2016 – August 2016

Projects

Buzzy Work • github.com/buzzy-work

May 2020

- iOS application for peer controlled work tracking for a "Worker" controlled by a "Queen", marketed towards parents for tracking chores, or for couples
 - Gives rewards for activities in a selection of in-app currencies, with custom art
 - Remote server controls a notification system and a Postgres database, with 8 tables including a homebrewed session system to manage 1 hive with 2 phones under a shared login
- Xcode, Swift, CocoaPods
 - Procreate
 - PostgreSQL, Rails

PillPals • github.com/pill-pals

September 2019 – April 2020

- Android application for improving medication adherence. Built in over 20k lines of code. iOS and user authentication servers are proofs of concept.
 - Created a medication search engine, a multiple choice quiz question generator using online databases, a medication alarm system, and a pill bottle scanner.
 - Created designs and database schemas as lead architect
- Android Studio, Realm.io, Xcode
 - Kotlin, Google Vision
 - Figma, Lucidchart

SongSynth • songsynth.herokuapp.com

April 2018

- Web app for writing and producing music
 - Uses MIDI.js open-source library to create a midi keyboard
 - Modified the metaphone 2 algorithm to create a rhyming calculator
- AngularJS, Node.js
 - JavaScript
 - JavaScript, C++

Pittston Area Key Club Website • pahskeyclub.org

February 2017

- Website for a high school Key Club to manage events and members
 - Updates events in real-time
 - Uses browser cookies to store "remember me" tokens
 - [Available on GitHub](#)
- PHP, JQuery
 - AJAX
 - PHP, MySQL

Freezing of Gait Detection Project • University of Waterloo

November 2016

- Developed an Arduino program that identifies when a patient with Parkinson's disease is experiencing "freezing of gait"
 - Developed detection algorithms by analyzing trial data
 - Designed physical device with IMU accelerometer to be strapped to back of calf
 - [Arduino program available on GitHub](#)
 - [Available on GitHub](#)
- C++
 - MATLAB

Collapsible Motorcycle Helmet Project • University of Waterloo

November 2015

- Developed a collapsible fiberglass motorcycle helmet for use in developing countries
- Structured the helmet to collapse in to a ring shape, with a push-pin locking mechanism
- Used design tools such as QFD's, best of class charts, SOC charts and morphological charts

Education

Bachelor of Applied Science, Biomedical Engineering, Honours • University of Waterloo
Co-operative Program, Management Sciences Option

Degree Awarded June 20, 2020