

WALKER HILDEBRAND

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 wbhildeb  wbhildeb

TECHNICAL STRENGTHS

Languages	C++ · C# · Bash · Java · Python · SQL · MongoDB · Javascript · Node.js
Tools	MFC · Angular · Express · .NET · UNIX · Git · Visual Studio · OpenGL

EDUCATION

University of Waterloo

Bachelor of Computer Science (82% major avg)

Expected Apr 2022

President's Scholarship of Distinction

WORK EXPERIENCE

McAfee | Software Developer

Sep 2019 - Dec 2019

Leading cybersecurity company, provider of McAfee WebAdvisor browser extension & native app

- Developed a messaging system between the testing framework and extension that exposed internal functionality to testers, but kept the application's internals secure from the public
- Created a proxy server with C# and Powershell to mimic responses of the extension's HTTPS requests
- Researched, built and modified Chromium source code to provide a McAfee browser proof of concept
- Created an internal tool for manipulating and backing up the LevelDB and IndexedDB implementation of Chrome and Firefox's `browser.storage.local` API

Rocscience | Software Developer

Jan 2019 - Apr 2019

World leader in providing advanced geotechnical software to civil engineering and mining industries

- Created a CAD module to model the construction of complex 3D embankment loads and conduct time-dependant vertical soil consolidation analysis using C++, MFC and OpenGL
- Developed algorithms to validate, discretize, and analyze the loads with a focus on time efficiency
- Improved accuracy of settlement analysis while connecting the CAD module to the engine
- Redesigned several geometric and mathematical tools with an efficient, **graph theory** based approach

Payworks | Software Developer

May 2018 - Oct 2018

National provider of cloud-based payroll and workforce management systems

- Deployed the automated testing framework, developing it in C# from a preliminary phase into a working product ready to perform smoke, end-to-end, acceptance and regression tests
- Played a decisive role in the design and implementation of the framework's core architecture
- Reinvented the method of interacting with inconsistent grid components throughout the site, immensely reducing the amount of boilerplate code and greatly improving maintainability
- Utilized **advanced design patterns** to abstract and encapsulate the construction of elements

PROJECTS

🌐 Spotify SubPlaylists (Node.js, Firebase, Angular)

October 2019 - Present

- A web app that allows users to setup playlists ‘trees’ – songs added to a playlist get added to ancestors
- Led a small dev team of classmates using skills in project management and software design
- Structured the project to easily be extendible and allow new features such as locking playlists, tracking listening history, and auto-generated playlists with the user’s most played songs of the month

🔗 EasyDocs (DeltaHacks V) (Python, SQL, Django & Javascript)

January 2019

- A web application for general practitioners that generates patient information templates, highlighting important data & potential medical issues
- Designed an intricate **SQL** database to relate medical ailments, treatments, side-effects, conflicting medicines, family histories, as well as HCP, patient and scheduling data
- Implemented risk assessment for medical conditions based on patient data & other risk factors
- Analyzed patient illnesses, treatments & side-effects to warn healthcare providers of potential conflicts

🔗 LocalizeCS (Bash)

October 2018

- Created a command-line program allowing users to create and sync local versions of remote environments as a solution to the frustrations of completing assignments on UWaterloo’s remote servers
- Built Git-inspired functionality to push, pull, sync and “diff” changes between the environments
- Implemented features that allow remote execution of commands and easy connection to the remote
- Shared the program amongst classmates and peers who frequently use it for assignments

Smaller Projects (Various Languages)

- 🌐 FoosBoard - A modular express application that allows users to track workplace foosball games via Slack with team names, smart leaderboards and player stats
- 🌐 10FasterFingers - Chrome extension that allows users to cheat on several typing test websites. Used a javascript OCR library to outwit the anti-cheat measures.
- 🌐 Ride The Bus - Developed a program in **C#** that simulates a card game. Programmed and analysed different playing strategies and their efficacy

ACADEMIC & PERSONAL ACHIEVEMENTS

Third place in University of Manitoba Math Contest

2017

Placed in the top 15% in several national math contests

2014-2017

3 WSD Academic Achievement Awards

2014-2017

Manitoba Provincial Record - 400m Medley Relay

2010-Present

EXTRACURRICULAR INTERESTS

Playing Music - Guitar, Bass & Piano

Visual Art - Programmatic & Geometric Art, Abstract Drawing

Martial Arts - Judo & Muay Thai

Hiking & living up to my name as a Walker

Reigning Foosball Champ at McAfee Waterloo