David H. **Benson**

Audio software developer

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Experience

MCGILL UNIVERSITY | Research Assistant (Software Developer)
2013 – Present | Montreal, QC

- ➔ Built software tools to support research activities in the Sound Recording Area at the Schulich School of Music (Web Audio API/AngularJS/Ruby on Rails, Max/MSP, C++/JUCE)
- ➔ Wrote a plugin for controlling multichannel reverberation that was ultimately used in the Disney feature film Maleficent (C++/JUCE)
- ➔ Analyzed audio signals in Matlab
- ➔ Co-authored papers for international conferences, contributing expertise in statistics and signal processing

WEBTET.NET | Full-Stack Software Developer
2011 – Present

- ➔ Developed a web application to teach critical listening skills to sound engineers (Web Audio API/Javascript/Ruby on Rails)
- ➔ Maintained near-constant uptime for over a decade as webtet.net became the most popular site of its kind, serving thousands of students each month
- ➔ Wrote custom multithreaded DSP code for dynamics compression
- ➔ Minimized code regressions via an extensive test suite

Skills

Expert Javascript • AngularJS • Ruby on Rails • Web Audio API • HTML • CSS • AWS S3 • git

Proficient C • C++ • JUCE • SQL • Matlab • Heroku • Max/MSP • Shell script • Node.js

Activities and interests

- ➔ Professional musician since 2001. Choir singer with the Montreal Symphony Orchestra and the Montreal Bach Festival; backup vocalist for Voivoid, Malajube & Deltron 3030. Headlined at the Montreal International Jazz Festival and others

Education

PHD IN SOUND RECORDING | McGill University 2022

- ➔ Researched intuitive user interfaces for reverberation effects
- ➔ Demo: https://virb.herokuapp.com?u=ap

MA IN MUSIC TECHNOLOGY | McGill University 2007

- ➔ Outstanding Teaching Assistant Award
- ➔ Coursework included digital signal processing and music & machine learning

B.MUS IN MUSIC TECHNOLOGY & VOICE PERFORMANCE | McGill University 2004

- ➔ High Distinction (GPA 3.8/4)
- ➔ Coursework included real-time audio application development (C), data structures & algorithms, object oriented design, and other computer science fundamentals