

Marina Cottrell

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<https://github.com/minamouse>

<https://ccrma.stanford.edu/~marina/>

SKILLS

Programming Languages: Python, C#, C++, Java, Chuck/Chunity, MATLAB

Frameworks/Libraries: music21, Tensorflow, Keras, Verovio, pandas, scipy, matplotlib, Jupyter

Web: JavaScript, PostgreSQL, XML, HTML, CSS, Heroku

Software: Unity, Logic Pro, Photoshop, MuseScore, Finale, Audacity

Music: Violin/Viola (20 years), Voice (15 years), Piano (5 years), Arranging and Orchestration, Sound Recording and Mixing, Music Theory, Orchestral and Choral composition, Film scoring

Languages: English, German, French

EXPERIENCE

Facebook, Menlo Park — Software Engineer Intern

JUNE 2018 - SEPT 2018

Worked on the Facebook Audio team working on the [Spatial Workstation](#).

Researched and implemented smooth transitioning between Ambisonics and Object-based audio as ways of spatializing audio.

Implemented perceptual audio importance ranking algorithm.

Technologies: C++/C, Python, Git, Mercurial, XCode, Visual Studio

Branch Metrics, Palo Alto — Software Engineer Intern

JUNE 2017 - SEPT 2017

Worked as a backend engineer on authentication.

Implemented SSO (Single Sign-On) for the product and rolled out usage for in-house authentication.

Technologies: Java, Javascript, Git

Digital Distributed Music Archives and Libraries Lab, McGill University — Research Assistant

MAY 2015 - AUG 2016

Worked as a programmer for DDMAL with Ichiro Fujinaga and Julie Cumming.

Worked on maintaining and adding to the [VIS-framework](#) to create tools for research in

computational musicology.

Implemented a basic mode-finding algorithm and began the process of gathering and processing data for a large-scale machine learning implementation.

Researched and implemented pattern-matching algorithms for musical search tools and to develop metrics of musical similarity.

Presented at the Music Encoding Conference about my work on the VIS-framework and examples of how it can be used in research.

Technologies: Python, Git, XML, Java, Javascript, HTML, Verovio

EDUCATION

Stanford University — *Master's in Music, Science, and Technology*

SEPT 2017 - PRESENT

Stanford Arts Institute Fellowship, Advisor: Jonathan Berger

Courses: Computer-Generated Sound, Digital Audio Signal Processing, Sound Recording Technology, Psychoacoustics & Music Cognition, Neuroscience and Musical Gaming, Deep Learning, Music, Computing and Design, Computational Music Theory and Analysis

Teaching Assistant for Music 101 - Introduction to Creating Electronic Sounds

Member of VR research lab with Ge Wang.

McGill University — *Bachelor's in Music Theory*

SEPT 2012 - MAY 2016

Minor in Music Education

Courses: Psychology of Music, Modal Counterpoint, Tonal Counterpoint, Topics in Tonal Analysis, Topics in Pop Music Analysis, Topics in Post-Tonal Analysis, Proseminar in Music Analysis, Mathematical Models of Music Analysis, Introduction to Computer Science, Programming Languages and Paradigms