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Coursework

Intro to Computer
Systems,
Principles of Functional
Programming,
Sound Recording,
Electronic and
Computer Music,
Principles of
Imperative
Computation,
Concepts of
Mathematics

Programming

C/C++, Python, Java,
C#, SML, JavaScript,
HTML/CSS, Latex

Software

Max MSP, Reason,
Ableton Live, Pro
Tools, XCode, Matlab

Skills

Software and mobile
app development,
Sound engineering,
Circuit design,
Soldering, Arduino,
Music performance

Awards

CMU Holleran Scholar
Wilkins Scholarship
Recipient

Sara Adkins

Music Technology and Computer Science

Education

- 2014 - 2018 **Carnegie Mellon University** Pittsburgh, PA
Music Technology major with a concentration in Computer Science
Joint degree between School of Computer Science, College of Fine Arts and
Carnegie Institute of Technology
GPA: 3.5/4.0
- 2010 - 2014 **Hereford High School** Parkton, MD

Work Experience

- 2015-now **Research Assistant** Pittsburgh, PA
Working with Professor Roberta Klatzky in the Human Computer Interaction
Institute at Carnegie Mellon University
Researching how humans perceive textures and how they can be reproduced
by rendering from friction on tablets and through force feedback systems
- 2014-now **Music Technology Lab Assistant** Pittsburgh, PA
Manage lab approximately 5 hours a week
Assist students working on projects in using software such as Max MSP, Fi-
nale, Reason, and Pro Tools
Key access in order to lock up equipment and unlock the lab for student use

Projects & Activities

- 2015-now **RobOrchestra Project Leader** CMU Robotics Club
Lead a team of students in designing, building, and programming robotic in-
struments that can read and perform MIDI files
Developing the Max MSP interface the robots use to read MIDI data, allowing
them to play autonomously together and mimic improvisation
Compose and arrange orchestra repertoire
- 2015-now **Project Ignite Student Advisor** Project Ignite
Startup student organization that aims to establish a project-based educa-
tional program that allows CMU students to mentor local high school students
and lead them in a research project
- 2014-now **Carnegie Mellon Chamber Guitar Ensemble** CMU School of Music
Perform a variety of solo and chamber music pieces from every major style
period in classical music repertoire
- Spring 2015 **Kinect Theremin** Electronic and Computer Music Final Project
Developed a Microsoft Kinect application using C# and Max MSP that tracks
the user's hand movements relative to their torso to enable them to make
music with their hands
The user is able to control frequency of pitch, volume, and the level and speed
of frequency modulation(vibrato) to create a unique and expressive sound
- 2014-2015 **Tone Analysis App** Personal Project
Developed an app that gives amateur brass musicians a visual representa-
tion of their tone quality through a graph of overtones
Utilized Fast Fourier Transformations in Matlab to compare the user's
recorded sound wave to a goal tone