

Riley Winton

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Education

Georgia Institute of Technology – Atlanta, GA

Master of Science in Human-Computer Interaction
Computing Specialization; GPA: 3.9

Aug 2012 – Dec 2014
(Expected)

Bachelor of Science in Psychology & Minor in Music

President's Scholarship – Top 2% of incoming freshman class; GPA: 4.0 – Highest Honors

Aug 2008 – May 2012

Skills

Software		Design		Prototyping		Research	
Max/MSP	Visual Basic	AVID Pro Tools	3DS SolidWorks	Hardware		Research Design	
Pure Data	HTML/CSS	Apple Logic	NI Multisim	Arduino		Data Collection	
Matlab	JavaScript	Adobe Audition	NI Ultiboard	Audio & Acoustics		Data Analysis	
Python	SoundCheck	Adobe Photoshop	Cadsoft Eagle	Sensors & Transducers		Data Reporting	
Processing	ACQUA	Adobe Premiere	Audacity	Circuit Analysis		Communication	
E-Prime	Audio	Adobe Illustrator	LTSpice	Construction		Leadership	
SPSS	Precision	Adobe InDesign	Finale	Soldering		Music	

Work Experience

Apple, Inc. - *Audio & Acoustics Validation Intern*

Jan 2013 – Aug 2013

- Verified audio hardware and DSP performance for iPhone, iPad, Mac, and other Apple products.
- Objectively tested products and developed experimental procedures/software for subjective analysis.
- Collaborated on user interface design for software development projects.
- Created a flexible automated testing system for variable audio conditions.
- Programmed automated graphing applications for data reporting and analysis.

Georgia Tech Sonification Laboratory (SonLab) - *Research Assistant*

Feb 2011 – Present

- Conduct studies of auditory perception, usability, preference, and affect.
- Produce sonifications and sound design via Matlab, Max/MSP, Pure Data, and other tools.

Georgia Tech College of Computing - *Undergraduate Teaching Assistant*

Jan 2012 – Aug 2012

- TA for "Human-Computer Interaction" and "Principles of Computer Audio."
- Educated audio programming, assisted students with design project, and graded homework & exams.

Research

In-Vehicle Driving Research (SonLab)

Aug 2013 – Present

- Explore how driver attention and performance changes with cell phone use and auditory feedback.
- Capture and analyze physiological, cognitive, and performance metrics in hi-fi driving simulator.

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- NASA Wearable Noise-Canceling Vest (Ubiquitous Computing)** **Jan 2014 – May 2014**
 - Researched use context for astronauts dealing with high ambient noise on International Space Station.
 - Developed microphone/speaker circuitry and DSP for phase inversion and delay in Max/MSP.
- Leach Power Amp & Subwoofer Design (GT Audio Lab)** **Aug 2013 – May 2014**
 - Designed a 12" closed-box subwoofer for EE 4445 (Audio Engineering) project in Matlab/MultiSim.
 - Planned and constructed a 3-channel power amp with custom chassis and original circuitry.
- Electronic Percussion Ensemble (GT Music Tech)** **Jan 2014 – May 2014**
 - Constructed electronic instruments via Arduino/MIDI for programmatic live performance.
 - Instruments included an 8-foot tall capacitive touch harp and sample-triggered bow and arrow.
- Accessible Aquarium & Fugue (SonLab & Undergraduate Thesis)** **Feb 2011 – Jan 2014**
 - Develop a system for the real-time sonification of dynamic aquaria exhibits.
 - Performed musical analysis and programmed music generation system in Max/MSP.
- Kepler Sonification (SonLab)** **Dec 2011 – Jun 2012**
 - Sonified data from NASA's Kepler Telescope for use in a professional music artist's album.
 - Published and displayed project at ICAD (International Conference for Auditory Display) 2012.
- GE Auditory Interfaces (SonLab)** **May 2011 – Oct 2011**
 - Researched guidelines on how to produce effective and aesthetic sounds in GE's auditory interfaces.
 - Produced sound design examples promoting positive user affect with various household appliances.

Music

- Centennial High School Percussion Instructor – Roswell, GA** **Jul 2010 – Present**
 - Perform sound design, audio engineering, education, and composition for the percussion section.
- Georgia Tech Marching Band – Atlanta, GA** **Aug 2008 – Dec 2012**
 - Percussion & Bass Drum Instructor 2012, Section Leader and Member 2008 - 2012
- Kappa Kappa Psi National Honorary Band Fraternity Iota Chapter – Active Member** **Jan 2009 – May 2012**
 - Vice President of Membership 2010 – 2011, Class of Spring 2009

Performing Ensembles

- NFL Atlanta Falcons Drumline
- Georgia Tech Electronic Percussion Ensemble, Wind Ensemble, and Orchestra Percussionist
- KKΨ / TΒΣ National Intercollegiate Honor Band Percussionist
- National Brass Symposium Percussionist

Awards & Memberships

- Dr. E Jo Baker Finalist: Leadership award given annually to top upperclassman President's Scholar
- Molly Davenport Undergraduate Psychology Award: Faculty voted award for top graduating senior
- AES (Audio Engineering Society), ASA (Acoustical Society of America), & Psi Chi Student Member
- President's Undergraduate Research Award (PURA) for Accessible Aquarium Project
- Kappa Kappa Psi AEA National Merit Scholarship Recipient
- West Hall High School Class of 2008 Valedictorian
- Georgia Governor's Honors Program (GHP) 2006 Mathematics Major & Music Minor