

# Curtis Ullerich

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## Education

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**Iowa State University**, National Merit Scholar

December 2013

B.S. in Computer Engineering, Minor: Music Technology

**GPA: 3.93**

## Work Experience

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**Google** - Software Engineer

Beginning 3/2014

**Microsoft** - Software Development Engineer Intern

5/2013-8/2013

- Developed application for Hadoop YARN

**Garmin International, Inc** - Software Engineer Intern

5/2012-8/2012

- Prototyped system to solve natural language processing problems using machine learning
- Independently learned NLP/ML skill set, communicated concepts to superiors

**Iowa State University** - Undergraduate Research Assistant

2/2012-present

- Manually analyzed thousands of lines of Android app source
- Used graph theory to automate static analysis detection of Android app malware

**Iowa Foundation for Medical Care** - Software Engineer Intern

6/2011-8/2011

- Wrote logic flow validation for dozens of doctor-patient interactions
- Participated in daily stand-ups as member of Agile team, used test-driven development

**Iowa State University Music Department** - Music tech lab moderator

8/2010-12/2010

- Instructed students in music software use, helped debug various projects

**Iowa State University** - Bioinformatics Research Application Developer

5/2010-12/2010

- Fixed and extended Cytoscape plugin from non-compiling source
- Self-taught basics of graph theory (having taken just one programming class at this point)

## Major Projects

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**Unified Butterfly Recorder**

1/2013-present

- Android app for efficient, semi-automated data recording for conservation workers in the field

**ISU Marching Band Attendance System**

1/2012-present

- Spearheaded pro bono team of 4 student developers to implement/release open source system
- Eliminated hundreds of man-hours of work per season, simplified system for 350 users/year, and eliminated all paper waste from the process with award-winning project

**University Honors Capstone Project**

1/2012-present

- Explored haptic-enabled virtual reality scenes as music performance interfaces
- Developed Python scripts to extend interactive capabilities of X3D scenes
- Performed at Society for Electroacoustic Music in the United State Conference 2013

**Pitch Trail Composer**

9/2011-12/2011

- Developed interface in Max/MSP for synthesizing audio corresponding to mouse input

## Skills

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Proficient in Java; Prior experience with C, C++, Python, and Hadoop

## Activities and Leadership

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IEEE-USA New Face of Engineering: College Edition 2013, Eta Kappa Nu (president), Cyber Defense Competition 1st place team, Collegiate 4-H, University Honors Program, Iowa 4-H Youth Technology Team mentor, Cyclone Marching Band guide, community jazz band founder and leader, author of human-vs-computer Pong implementation to use in teaching programming to high schoolers

## Volunteer Experience

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700+ hours as community music performance organizer, horse-assisted physical therapy volunteer, and 4-H mentor, chaperone, and judge

2009-present

## International Experience

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Semester abroad at the University of Birmingham, UK, Spring 2011

- Classes in data mining/information retrieval, computer networking, philosophy of cognitive science, microprocessor programming in assembly, and electroacoustic music composition