JULIA ZHANG

BIOENGINEER

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EDUCATION

2013-2017 **Rice University** GPA: 3.87
B.S. in Bioengineering

EXPERIENCE

August 2016 - Present **Aprenda Systems**
Software Intern

Collaborating with a team to improve platform by adding features to optimize the data sharing process.

June 2016 - August 2016 **General Electric (GE) Healthcare**
Software Intern

Improved performance of Centricity Universal Viewer by implementing database caching and multithreading operations to reduce image loading time. Built proofs of concept (image fetching servlet and search engine) for product troubleshooting improvement.

May 2014 - August 2014 **NSF REU at Texas Tech University**
Research Intern in Computer Science

Designed an Answer Set Prolog computer program that accurately recommends treatments derived from clinical practice guidelines for various co-morbid diseases.

August 2014 - May 2016 **Pediatric Cardiac Engineering Lab at Texas Children's Hospital**
Research Assistant

Led investigation of polyurethane core in hybrid cardiac patch for the creation of a tissue engineered device for congenital heart defects. Assessed stem cell viability in hybrid patch to attain a pre-vascularization.

LEADERSHIP

August 2014 - Present **MusicMDs**
President
Expanded music therapy program by partnering with Love Street Alliance, a local music therapy non-profit. Led executive board meetings and spearheaded hospital wide concerts.

PROJECTS

GE Emerging Technologies Project
Summer 2016 | HTML + CSS + jQuery
Created a web application that verifies server and website availability of websites to help employees better troubleshoot their problems.

Computational Lung Model
Fall 2015 | MATLAB
Constructed an accurate MATLAB model of the lungs that can determine the gaseous compositions of total lung capacity and arterial blood.

Electromyograph
Fall 2015 | LabVIEW + Circuitry
Designed and constructed a medical device that accurately detects muscle contractions and translates analog signals into relevant medical data.

Optical Immunoassay System
Fall 2015 | LabVIEW + Circuitry
Engineered an optical immunoassay that can precisely and accurately test whole blood for particular analytes through the analysis of light diffraction by nanoshells.

Pulse Oximeter
Fall 2015 | LabVIEW + Circuitry
Designed a medical device that performs peak detection and de-multiplexing to translate electronic information into oxygen saturation and pulse.

SKILLS

Languages	*Proficient:* Java, MATLAB, LabVIEW, HTML, CSS *Familiar*: JavaScript, jQuery, ASP Prolog
Design	AutoCAD
Circuitry	Analog, Electronic Measurement Systems
Lab Techniques	Cardiomyocytes + NIH/3T3 + AFSC culture, live/dead and antibody Staining