Email: rzs207@nyu.edu https://github.com/Souloist

### **EDUCATION**

#### New York, NY **New York University** Sep 2014 – Dec 2016

M.S. in *Electrical Engineering* 

- Areas of Specialization: Signal Processing, Machine Learning
- Graduate Coursework: Data Structures/Algorithms, Probability and Stochastic Processes, Matrix theory
- Relevant Projects: ECG Signal Recovery, Keyboard Visualizer, Audio Effect Implementations

#### **Rutgers University** New Brunswick, NJ Sep 2010 - May 2014

B.S. in *Biomedical Engineering*, Minors: Mathematics/Psychology

 Undergraduate Coursework: Probability theory, Linear Algebra, Tissue Engineering, Drug Delivery, Kinetics and Thermodynamics, Transport Phenomena

# PROFESSIONAL AND RESEARCH EXPERIENCE

#### **Software Engineer Truveris** Aug 2016 – Current

- Integrated additional copay programs to IVR system and web portal for prescription-drug coupon activations, using Twilio and third-party adjudicators
- · Built a text messaging program for the prescription savings program which included custom messages, automated reminders, and SMS prescription-refill requests
- · On-boarded new front-end engineers on front-end stack: React, Flux, Babel, Webpack, Gulp

# **Software Engineering Intern**

**Truveris** 

May 2016 – Aug 2016

- Developed features for the OneRx pharmacy price comparison web app using React.js, and Flux
- Implemented testing infrastructure for React applications with Karma, Jasmine, Enzyme, and PhantomJS
- Trained classifier with prescription data using convolutional neural network and TensorFlow

# **Engineering Mentor**

### Codecademy

Feb 2016 - Sept 2016

Sep 2014 - May 2016

- Taught Python, Java, JavaScript, SQL, React and version control with Git
- Conducted code reviews with new students and aided in learning programming fundamentals.

#### **Crowd Collaborator Stanford University** Jan 2016 - April 2016

Stanford Crowd Research Collective

Collaborated with Michael Bernstein to add features to Daemo, an online crowdsourcing marketplace

### **New York University Adjunct Instructor**

Course: Introduction to Engineering and Design

### **PROJECTS**

# **ECG Signal Recovery (MATLAB)**

- Recovered ECG signal from noisy, incomplete data using least squares deconvolution and interpolation
- Implemented deconvolution iteratively using Landweber algorithm

### Fun-thesizer (JavaScript, HTML5/CSS3)

- Keyboard visualizer using the Web Audio API that can play/draw sounds with varying audio filters applied
- Integrated tuna.js library to apply filters to input signal

### Audio Effect Implementations (Python)

• Implemented various effects (AM modulation, reverb, distortion) in python using the PyAudio library

# Non-invasive Hypertension Monitor (MATLAB, Arduino)

- Utilizes a pressure transducer to detect the pulse pressure and determine arterial compliance
- Filtered signal using customized Butterworth filter to eliminate noise within a frequency range

### **LANGUAGES AND TECHNOLOGIES**

**Programming Languages:** Python, JavaScript, Java, SQL, MATLAB

Web Technologies: React.js/Flux, Webpack, Babel, Gulp, Flask, Pyramid, SQLAlchemy, AWS

Software/Other: Mecurial/Git, Bash, Linux (Ubuntu), Vim, PostgreSQL