

# Aswin Sivaraman

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## EDUCATION

### PhD Intelligent Systems Engineering

Indiana University  
Aug 2017—Current

### BS Electrical Engineering

University of Illinois at Urbana-Champaign  
Aug 2011—May 2015

## SKILLS

### Programming:

Python, Perl, C, C++, MATLAB

### Libraries:

Tensorflow, Keras, Redis, AWS  
DynamoDB, Alexa Skills Kit

### Web:

HTML5, CSS3, JavaScript,  
Angular, jQuery, Node,  
Express, RESTful, SQL, NoSQL,  
MongoDB, PHP, Bootstrap,  
Foundation, Wordpress

## PROJECTS

### Qualcomm Onboard

Developing custom job-board webapp which intelligently pairs prospective Qualcomm interns with best-fit technical teams, enabling students to work on relevant summer projects imperative to the company.

### Music Browser / Scrobbylr

Built music information retrieval webapp which fingerprints music played on vinyl turntable, fetches metadata via Spotify and Discogs, then displays song information in real-time.

## RESEARCH

### Signals and AI Group in Engineering (SAIGE)

Aug 2017—Current

*Prof. Minje Kim*

Researching machine learning approaches to audio signal processing problems such as speech recognition, speech denoising, audio enhancement, audio compression/coding, and psychoacoustics.

### Computational Audio Lab (CAL)

Aug 2014—May 2015

*Prof. Paris Smaragdis*

Wrote undergraduate thesis evaluating a novel framework for speech recognition utilizing winner-take-all semantic hashes of spectrogram frames.

### Statistical Speech Technology Group (SST)

May 2014—Jan 2015

*Prof. Mark Hasegawa-Johnson*

Performed audio database segmentation using speech recognition and synthesis toolkits for use in an Emotive audio-visual avatar.

## EMPLOYMENT

### Qualcomm

Jul 2015—Aug 2017

*Embedded Software Engineer / Campus Team Member*

- Handled over 100 change requests for the Diagnostic Services team from Qualcomm customers and internal engineers
- Developed new embedded debug trace buffer used on Qualcomm Aqstic audio codec (WCD 9340/9341)
- Organized intern events throughout Summer 2017, managing intern homepage and administrating the intern-exclusive hackathon
- Received Qualstar award for creating a Python + OpenCV workshop using the Dragonboard 410c which has been taught at numerous universities

### University of Illinois at Urbana-Champaign

Jan 2015—May 2015

*Teaching Assistant for CS498RK (Art of Web Programming)*

- Created assignments and exams in collaboration with Prof. Ranjitha Kumar for new full-stack web development course
- Taught lab on OAuth middleware in NodeJS to over 100 students

### Yellow Box Advertising

Jan 2012—Current

*Freelance Web Strategist*

## PUBLICATIONS

[1] Kai Zhen, Aswin Sivaraman, Jongmo Sung, and Minje Kim. "[On Psychoacoustically Weighted Cost Functions Towards Resource-Efficient Deep Neural Networks for Speech Denoising](#)", (Under Review), *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Calgary, Alberta, Canada, Apr. 15 - 20, 2018.