

DAVID ASSEFA TOFU

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EDUCATION

Boston University

PhD Student

Department of Computer Science

August 2019 - Present

Columbia University

BSc in Computer Science

Concentration in Applied Mathematics

August 2015 - May 2019

PUBLICATIONS

Elshadai Tesfaye Biru, Yishak Tofik Mohammed, **David Tofu**, Erica Cooper, and Julia Hirschberg. Subset Selection, Adaptation, Geminaton and Prosody Prediction for Amharic Text-to-Speech Synthesis. In *Proc. 10th ISCA Speech Synthesis Workshop*, pages 205–210, 2019

RESEARCH EXPERIENCE

Research Assistant

Spoken Language Processing Group

February 2017 - December 2017

Columbia University

- Researched corpus subset selection methods to improve speech synthesis for low resource languages, results were published in paper referred to above
- Built 55 hours of high quality speech synthesis training corpus for the Amharic language using audio and text found on the internet
- Communicated findings through weekly meetings and emails to supervisors

TEACHING

Teaching Fellow

Introduction to Natural Language Processing

January 2020 - Present

Boston University

- Prepared the first assignment which applied popular NLP tools on a subset of Wikipedia; Compiled the Wikipedia subset corpus
- Revise previous year's assignments, hold office hours and lab sessions, grade assignments

Tutor

Introductory Computer Science courses

September 2016 - May 2017

Columbia University

- Met weekly, one-on-one or in small groups, with the same students for an entire semester, held additional on-demand hours
- Courses included Data Structures and Algorithms, Introduction to Java, Introduction to Python

OTHER EXPERIENCE

Research Computing Consultant

Engineering IT, Boston University

June 2019 - August 2019

Boston, MA

- Prototyped script to continously upload large medical imaging files to the cloud
- Partly ported outdated server configuration scripts, making numerous decisions along the way for high security and maintainability

Web developer

June 2019 - August 2019

*HIV Economics & Epidemiology, Boston University School of Public Health**Boston, MA*

- Designed and implemented public facing website to showcase academic work

Technical Consultant

February 2017 - May 2019

*Columbia Law Review**New York, NY*

- Designed, coded and documented an application to facilitate membership selection
 - Features include integration of multiple data sources, support for a sophisticated grading routine including normalization, candidate flagging mechanisms, and resilience to human error
- Maintained online publishing platform and ensured adherence to the *Review's* formatting guide

Technology Intern

May 2018 - July 2018

*Massar Capital Management**New York, NY*

- Co-designed and developed computationally efficient algorithms for financial risk analysis
- Introduced and setup unit testing and containerized continuous integration to the development process
- Developed proprietary in-house web application

Software Engineering Intern

June 2016 - August 2016

*Apposit**Addis Ababa, Ethiopia*

- Developed management dashboard on an agricultural web app, which involved integration with various underlying components, including third party systems to fetch and display weather data
- Added feature to book a performance review with a manager using Google Calendar API on internal performance management system

RELEVANT COURSES

Core Courses

Advanced Spoken Language Processing
Computational Aspects of Robotics
Introduction to Natural Language Processing
Machine Learning
Programming Languages and Translators
Introduction to Linguistics

Other Courses

Advanced Optimization Algorithms
Randomness in Computing
Introduction to Dynamical Systems
Partial Differential Equations
Ordinary Differential Equations
Calculus & Linear Algebra