Kelsey Ball

kelseytaylorball@gmail.com

Education

The University of Texas at Austin — Austin, TX
B.S. in Electrical and Computer Engineering — *June 2017*
GPA 3.8/4.0

Relevant courses: Algorithms, Data Structures, Computer Architecture, Operating Systems, Embedded Systems, Software Testing, Probability and Random Processes, Data Mining, Intro to Computational Linguistics

The University of Texas at Austin — Austin, TX
Ph.D. in Electrical and Computer Engineering — *2025 (expected)*

Relevant courses: Probability and Stochastic Processes, Convex Optimization

Work Experience

ASAPP — New York City, NY
Machine Learning Engineer — *Feb 2019 – Aug 2020*

- One of two engineers responsible for the type-completion service of a customer interaction platform, which received 100+ requests per second.
- Automated majority of model lifecycle, from dataset creation to model retraining, evaluation, and versioning.
- A/B tested new models and analyzed test results to understand and communicate impact. Automated the analysis of routine A/B tests (e.g., A/B testing models retrained on new data).
- Led the research and development for a personalized type-completion model to increase the efficiency of customer service agents.

Qualcomm, Inc. — San Diego, CA
Software Development Intern — *Summer 2015*

- Built an internal testing tool to track optimized kernel parameters between builds.

Epic Systems Corporation — Madison, WI
Software Development Intern — *Summer 2014*

- Prototyped media-sharing web application for radiologists.

Research

Fulbright U.S. Student Program — Hyderabad, India
Fulbright-Nehru Student Researcher — *Aug 2017 – May 2018*

- Built a weakly supervised part-of-speech tagger for code-switched and transliterated text using recurrent neural networks (joint work with Dan Garrette).
- Our work was published at EMNLP, a top-tier conference for natural language processing.

The University of Texas at Austin — Austin, TX
Research Assistant, *Professors Toribio and Bullock* — *Fall 2014 – Fall 2015*

- Wrote a language tagger in Scala to analyze and quantify code-switching in multilingual texts.
- Presented at two conferences on language contact and transfer.

Teaching

The University of Texas at Austin — Austin, TX; Hyderabad, India
Teaching Assistant

- EE306: Introduction to Computing — *Fall 2016*
- EE319K: Introduction to Embedded Systems — *Spring 2014, Spring 2016*
- EE319K: Embedded Systems and Industry in India — *Summer 2016*

The University of Texas at Austin Austin, TX
Tutor

- EE306, EE302: Intro to Computing, Intro to Electrical Engineering *Fall 2013*
- EE319K: Intro to Embedded Systems *Spring 2015*

Publications

1. K. Ball and D. Garrette, "Part-of-speech tagging for code-switched, transliterated texts without explicit language identification," in *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing*, Association for Computational Linguistics, 2018.

Presentations

1. K. Ball, "Helping Alexa speak Hinglish," *South and Central Asia Fulbright Conference*, 2018.
2. K. Ball, B. E. Bullock, R. Neupane, and J. L. Serigos, "Toward developing a bilingual metric for U.S. Spanish," *25th Conference on Spanish in the US*, 2015.
3. K. Ball, B. E. Bullock, G. Guzmán, R. Neupane, K. S. Novak, and J. L. Serigos, "Bon cop, bad cop: A tale of two cities," *Transcultural Urban Spaces*, 2015.

Awards

- Fulbright Award *2017*
- Teaching Award, Cockrell School of Engineering, UT Austin *2017*
- Engineering Honors, Cockrell School of Engineering, UT Austin *2012-2013*
- Virginia and Ernest Cockrell, Jr. Fellowship *2020*
- Charles W. and Margaret A. Tolbert Endowed Scholarship in ECE *2020*

Service

- Presenter, *Career Connections*, U.S. Department of State *Oct 2019*
- Panelist, *CS Research Week*, Office of Undergraduate Research, UT Austin *Apr 2017*

Leadership

Texas 4000 for Cancer Austin, TX
Ride Director *Feb 2017 – Aug 2017*
Equipment and Gear Chair *Oct 2016 – Aug 2017*
Rider *Nov 2015 – Aug 2017*

- Cycled over 4,000 miles from Austin, TX to Anchorage, AK.
- Co-led team of 25 riders; trained and led crew of 4 mechanics.
- Logged over 2,000 training miles and 50 volunteer hours in preparation.
- Highest fundraising team in Texas 4000 history with over $700,000 raised for cancer research and support services.

Women in Electrical and Computer Engineering Austin, TX
VP of Corporate Relations *Fall 2013 – Spring 2014*
Communications Coordinator *Spring 2013*

- Organized social, academic, and professional events for undergraduate and graduate women in ECE.

Longhorn Stream Team Austin, TX
Citizen Science Committee *Spring 2015 – Spring 2016*

- Helped form a citizen-science initiative at UT.
- Paddled rivers and collected water quality data to promote water conservation in Central Texas.
- Taught environmental science to kids in the community through paddling excursions on Lady Bird Lake.

Skills

Programming Python, Scala, Java, C, C++, LaTeX, Bash, SQL
ML PyTorch, DyNet, nltk, pandas, scikit-learn
Tools Vim, Tmux, Git, macOS, Linux