Keith Harrigian

keithharrigian@gmail.com | (310) 713 – 0798
30 Peterborough Street. Apartment 20. Boston, MA 02215

Education

Sept. 2013 – May 2017	**Northeastern University** GPA 3.92/4.0 (Summa Cum Laude) BS in Mathematics. Minors in Physics and Music.

Academic Research

Aug. 2014 – Present	**The Action Lab** *Research Assistant | P.I. Dagmar Sternad*

- Engineered a new algorithm using Hidden Markov Models to precisely detect initiation of finger taps in noisy strain gauge time series data
- Characterized the influence of tDCS on complex object manipulation via Fourier Spectral Analysis of EMG data and smoothing of digital signal
- Co-supervised "Pitchers and Pianists" study at Boston Museum of Science from September 2015 through May 2016; educated 400+ visitors on human coordination and neural control

Industry Experience

June 2018 – Present	**Warner Media Applied Analytics** *Quantitative Analyst*

- Optimized the targeting of interest segments on Facebook in real time using contextual-bandits and factorization of audience overlap matrices
- Advised Masters student on a project to identify film mentions in podcast audio via fuzzy matching and supervised learning, resulting in publication

June 2017 – June 2018	**Legendary Entertainment** *Quantitative Analyst*

- Developed a multi-modal model to infer demographics of reddit users and a collaborative filtering system to segment online communities
- Programmed a tool to extract book titles mentioned on reddit, scrape metadata from an online reading database, and visualize demographic-level trends in an interactive web app
- Leveraged partial least squares regression to create a content- and marketplace-aware arbitrage model for the digital promotion of news articles

July 2016 – Dec. 2016	**True Fit Corporation** *Scientist (Co-op)*

- Designed a robust anomaly detection system to capture fraudulent retail transactions, reducing noise by 10% in recommendation engine training data
- Modeled e-commerce return rates to establish baselines for A/B testing
- Curated resources in scientific literature to motivate foundational design decisions for a proprietary clothing style recommendation platform

July 2015 – July 2016	**Legendary Entertainment** *Quantitative Research Collaborator (Consultant)*

- Led R&D of a conditional random field model for end-to-end named entity recognition on Twitter, allowing for dynamic query filtering based on temporal popularity fluctuations

Quantitative Research Analyst (Co-op)

- Created a command-line tool to acquire secondary market sales data and compile revenue reports, enabling 4 professional sports organizations to optimize ticket prices
- Trained Naïve Bayes model to quantify movie-going intent and infer sentiment within tweets

Publications

Harrigian, K.; Guo, D.; Park, S.; Sternad, D. Pitchers and Pianists: A Large-scale Study on Discrete and Rhythmic Timing. *In Preparation*.

Harrigian, K. Geocoding Without Geotags: A Text-based Approach for reddit. *In Proceedings of the 4th Workshop on Noisy User-generated Text (EMNLP)*. Brussels, Belgium. 1, Nov. 2018.

Gundogdu, A.; Sanghvi, A.; **Harrigian, K**. Recognizing Film Entities in Podcasts. *In Proceedings of the 1st Workshop on Machine Learning and Data Mining for Podcasts (KDD)*. London, England. 20, Aug. 2018.

Posters and Talks

Sternad, D.; Guo, D.; **Harrigian, K**. Pitchers and Pianists: Timing in Discrete and Rhythmic Motor Skills. *New England Sequencing and Timing Meeting*. Storrs, Connecticut. 25, Mar. 2017.

Harrigian, K.; Sanders, N.; Foster, J.; Sanghvi, A. When Anonymity is Not Anonymous: Gender Inference on Reddit. **Won Outstanding Student Research (Computer and Information Sciences).** *Northeastern Research, Innovation, and Scholarship Expo*. Boston, MA. 7, Apr. 2016.

Harrigian, K.; Kuznetsov, N.; Sternad, D. Effects of tDCS on Precision of Finger Force Control and Rhythmic Tapping Movements. *Northeastern Research, Innovation, and Scholarship Expo*. Boston, MA. 9, Apr. 2015.

Honors and Awards

Oct. 2016	**Marshall Fellowship Finalist** Nominated by faculty for outstanding academic merit and ambassadorial ability
Oct. 2016	**Rhodes Fellowship Nominee** Nominated by faculty for scholarly merit, social commitment, and leadership
Apr. 2016	**Outstanding Student Research (Computer and Information Sciences)** Best undergraduate poster in Computer and Information Science at Northeastern RISE 2016
Dec. 2015	**Barry Goldwater Scholarship Nominee** Research Proposal: Extreme Learning Machine for Localization of EEG in Parkinson's Patients

Grants

Apr. 2015	**Undergraduate Research and Creative Endeavors Award** $1000 to research effect of metric structure strength on motor learning of temporal rhythms
Apr. 2014	**Lawrence Award for Undergraduate Scholastic Excellence in Physics** $250 scholarship awarded to student(s) with the highest GPA in class year
Sept. 2013	**Northeastern College of Science Dean's Scholarship** $80,000 scholarship awarded to top incoming undergraduates

Academic Service

Sept. 2015 – May 2017	**Northeastern College of Science** *Peer Advising Coach and Ambassador* ▪ Met weekly with a first-year Physics undergraduate student to instill successful academic habits; curated a study schedule to address time-management issues ▪ Spoke at official admission events and contributed to social media marketing
Sept. 2013 – Jan. 2016	**Northeastern Student Government Association** *Chair of Elections* ▪ Raised voter turnout by 25% to a record high for campus of 18,000 undergraduates ▪ Reformed referendum process by increasing accountability and transparency of legislature

Community Service

Apr. 2014 – Apr. 2018	**Boston Athletic Association** *Team Captain (Recycling)* ▪ Led recycling operations for the Boston Marathon Finish Area ▪ Supervised team of 40+ volunteers in collection of recyclable goods and trash
Jan. 2009 – Aug. 2014	**Golden Retriever Club of Greater Los Angeles Rescue** *Volunteer and Foster* ▪ Served as caretaker for over 40 dogs; assisted in their transportation to medical appointments ▪ Expedited revenue collection at several fundraisers via PayPal

Technical Skills

Programming Languages	Python (Advanced), SQL (Intermediate), R (Functional), Stan (Functional), MATLAB (Functional)
Miscellaneous	Git (Intermediate), Bash (Functional)
Certifications	National Institutes of Health Office of Extramural Research (Human Subjects)