

# TESSA MASIS

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## EDUCATION

**Ph.D. in Computer Science, University of Massachusetts Amherst, 2020 – 2026 (Expected)**

- Advisor: Brendan O'Connor

**B.A. in Computational Linguistics, University of Massachusetts Amherst, 2018 – 2020**

- GPA: 3.94; Dean's List all semesters; Phi Kappa Phi member; Eta Sigma Phi member

**Prospective B.S. in Computer Science and Linguistics, Cornell University, 2015 – 2017**

**Relevant Coursework:** Neural Networks, Natural Language Processing, Cognitive Modeling, Computational Linguistics, Theories of Learning, Data Visualization and Exploration, Computer Systems Principles, Differential Equations, Linear Algebra, Probability, Multivariable Calculus, Syntax, Phonetics and Phonology

## PROFESSIONAL EXPERIENCE

**Research Assistant, University of Massachusetts Amherst, Fall 2020 – Present**

- Conducting analysis and experiments for inducing subjective knowledge bases from social text corpora
- Supervised by Dr. Brendan O'Connor

**Research Assistant, University of Massachusetts Amherst, Spring 2019 – Spring 2020**

- Implemented language models for linguistic probe task assessing the ability of deep context-sensitive neural network language models to acquire deictic knowledge from text
- Designed and implemented data-processing and morphological parsing scripts
- Supervised by Dr. Carolyn Anderson and Dr. Gaja Jarosz

**Analytics and Machine Intelligence Intern, Raytheon BBN Technologies, Cambridge, MA, Summer 2019**

- Implemented multilingual predictive word error rate classifiers using KNN, SVM, logistic regression, and random forests
- Designed and ran experiments on predicting word error rate from raw audio and speech recognition output
- Created synthetic transcribed code-switching speech corpora from monolingual ones

## TEACHING EXPERIENCE

**Undergraduate Teaching Assistant, University of Massachusetts Amherst, Fall 2019**

- Proctored exams and graded assignments for Programming Methodology course
- Mentored students via office hours and digital media

**ESL Instructional Tutor, Jones Library, Amherst, MA, Fall 2019 – Spring 2020**

- Volunteered in a local program giving biweekly individualized lessons to adult immigrants

## TALKS AND PUBLICATIONS

1. ProSPer: Probing Human and Neural Network Language Model Understanding of Spatial Perspective. **Tessa Masis** and Carolyn Jane Anderson. In *Proceedings of the Fourth BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP at EMNLP*. 2021.
2. Can neural network language models learn spatial perspective from text alone? Carolyn Jane Anderson and **Tessa Masis**. Paper presented at the *Bridging AI and Cognitive Science workshop (BAICS) at ICLR*. 2020.
3. The Poetics of Gender Devaluation in Homeric Heroism. **Tessa Masis**. Paper accepted at the *Scholarship for Undergraduate Literary Studies conference*, cancelled due to COVID-19. 2020.
4. Predictive Word Error Rate Metrics (WERMs). **Tessa Masis**. Presented work completed over the course of internship at Raytheon BBN Technologies. 2019.

## AWARDS AND GRANTS

- **Scholarship of Undergraduate Literary Studies Conference Travel Award**, cancelled due to COVID-19
- **Out For Undergrad Tech Conference Travel Award**, San Jose, CA, Fall 2019
- **Out in STEM Annual Conference Travel Award**, Houston, TX, Fall 2018

## **SKILLS**

- Programming languages: C, Java, JavaScript, MATLAB, Perl, Python
- Specialized software: NLTK, NumPy, PyTorch, scikit-learn, TensorFlow
- Languages: Proficient in French, Ancient Greek; Prior experience in Armenian, Mandarin