

# Laurel Goodhart

## Software Engineer & Computational Linguist

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### Experience

- 2019—2021 **Senior Software Engineer**, *Primed Technologies*, San Francisco, CA / remote.
- Brought an original character to life with innovative robotics and NLP software
    - Led architecture design for state-of-the-art computer conversation at scale
    - Led design and implementation of internal webapp for content authoring
  - Created a fantastic digital companion in a sprite-based iOS app
  - Rapidly prototyped 3D mobile games in Unity
- 2018 **Natural Language Processing Specialist**, *Woebot Labs, Inc.*, San Francisco, CA.
- Improved Natural Language Understanding in the Woebot mental health chatbot
    - Created data collection and annotation strategy
    - Trained, evaluated, and deployed language models for classification
  - Applied expertise in chatbot conversational design to existing product
    - Identified common pitfalls and suggested and implemented solutions
    - Conducted analysis of how natural language understanding issues affect retention during app onboarding
  - Assisted in creation of new chatbot authoring environment for use by non-technical users
- 2015—2017 **Artificial Intelligence Engineer**, *PullString, Inc. (formerly ToyTalk, Inc.)*, San Francisco, CA.
- Worked on *PullString Author*, a software platform for authoring human-fidelity AI conversation
  - Designed, implemented, and improved Natural Language Processing features
    - Features included negation detection, number conversion, user and author input normalization
  - Established large-scale testing to support data-driven decision-making
  - Collaborated with technical and non-technical peers on product features
    - Expressive word/pattern matching syntax for use by non-technical users
    - Natural Language Processing and Machine Learning -based synonym and phrase suggestion

### Education

- 2018 **Deep Learning Specialization**, *deeplearning.ai*, Coursera.
- Self-motivated continuing education
  - 5 courses: Neural Networks and Deep Learning; Improving Deep Neural Networks; Structuring Machine Learning Projects; Convolutional Neural Networks; Sequence Models
- 2013—2014 **Professional Master of Science in Computational Linguistics**, *University of Washington*, Seattle, WA.
- Focused on Natural Language Processing (NLP), Machine Learning (ML), and language modeling
    - Specific topics included Machine Translation, Information Retrieval, and Question Answering
- 2009—2013 **Bachelor of Arts in Applied Linguistics**, *Portland State University*, Portland, OR.
- Minor in Computer Science
  - Honors College, undergraduate thesis: “The Linguistics of Sentiment Analysis”

### Technical skills & selected projects

- ML** RNNs, CNNs, kNN, Decision Trees, Naïve Bayes, MaxEnt, and SVM (Python)
- NLP** HMM-based Part-of-Speech tagger, Word Sense Disambiguation system, CKY parser, tokenization, Context Free Grammars incorporating features and semantic representations
- Languages** Python, Javascript, C++, Java
- Tools** Git, GitHub, Jupyter, FastText, TensorFlow, NLTK, Stanford CoreNLP, Bash, L<sup>A</sup>T<sub>E</sub>X

### Publications

- 2013 Hart, Laurel “**The Linguistics of Sentiment Analysis**” Portland State University *PDX Scholar*.  
2013: <http://pdxscholar.library.pdx.edu/honorstheses/20>