Laurel Hart
Computational Linguist

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Experience

2018—Present **Natural Language Processing Specialist**, *Woebot Labs, Inc.*, San Francisco, CA.
- Improved Natural Language Understanding in the Woebot chatbot
  - Created a more naturalistic conversation experience for users
- Applied expertise in chatbot conversational design to existing product
  - Identified common pitfalls and suggested 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

2014 **Research Assistant**, *University of Washington - CSE*, Seattle, WA.
- Created a Java training data pipeline for multi-linguistic relation extraction system, MultiR
- Worked with large corpora:
  - Gigaword English, Spanish, and Chinese corpora: over 9 million documents
  - Freebase: currently over 2 billion facts
- Utilized Stanford's CoreNLP package for tokenization, Named Entity Recognition, parsing, etc.

Education

2013—2014 **Professional Master of Science in Computational Linguistics**,
University of Washington, Seattle, WA.
- Completed intensive, graduate-level program in 1 year
- 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 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, C++, Java

Tools TensorFlow, FastText, NLTK, spaCy, Stanford CoreNLP, Git, Mercurial, Bash, LaTeX

Publications

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

2012 Hart, Laurel, Hassan Alam and Aman Kumar, "**Revisiting Arabic Semantic Role Labeling using SVM Kernel Methods**" *Proceedings of COLING 2012*. December, 2012: 207—14. http://aclweb.org/anthology//C/C12/C12-3026.pdf