

Laurel Goodhart

Software Engineer & Computational Linguist

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Character-driven AI experiences, Natural Language Understanding (NLU), and Natural Language Processing (NLP)

Experience

- 2021—2023 **Principal Computational Linguist**, *Walt Disney Engineering*, remote
(current) D3-O9, interactive droid character aboard the Star Wars Galactic Starcruiser (Walt Disney World)
- Owned Natural Language Understanding (NLU) pipeline
 - Trained, evaluated, and iterated models for conversational agent
 - Identified trends in user testing to better tailor character content
 - Delivered and maintained production-ready NLU systems
 - Worked closely with Conversation Experience Designers to guarantee a “Disney magic” experience
 - Used insight into content-creation process to translate between creative and technical teams
 - Helped design next generation of experience-authoring tools
 - Worked with in-house researchers to define conversational quality metrics
- 2019—2021 **Senior Software Engineer**, *Primed Technologies*, San Francisco, CA / remote
Long-term companion robot + app-based character for kids
- Combined innovative robotics and Natural Language Processing (NLP) techniques
 - Led architecture design for state-of-the-art computer conversation at scale
 - Design and implemented internal webapp for content authoring
 - Created a fantastical digital companion in a sprite-based iOS app
 - Conducted rapid prototyping of 3D mobile games in Unity
- 2018 **Natural Language Processing Specialist**, *Woebot Labs, Inc.*, San Francisco, CA
Woebot, a mental health chatbot that teaches users Cognitive Behavioral Therapy techniques
- Created a novel application of Natural Language Understanding (NLU) to therapeutic exercises
 - Trained, evaluated, and deployed language models for activity and mood classification
 - Established a data collection and annotation strategy
 - Applied expertise in chatbot conversational design to existing product
 - Identified common pitfalls, suggested solutions, and implemented them
 - Conducted analysis of effects of NLU issues on retention during app onboarding
 - Assisted in design of new chatbot authoring environment for use by non-technical users
- 2015—2017 **Artificial Intelligence Engineer**, *PullString, Inc. (formerly ToyTalk, Inc.)*, San Francisco, CA
PullString Author, a software platform for authoring human-fidelity AI conversation; various conversational apps and toys, including *Hello Barbie*, *Doctor Strange*, *Thomas & Friends Talk to You*
- Designed, implemented, and improved Natural Language Processing (NLP) features
 - Including 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
 - NLP and Machine Learning -based synonym and phrase suggestion

Education

- 2018 **Deep Learning Specialization**, *deeplearning.ai*, Coursera
- 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”