

# Kendra Chalkley

Machine Learning Engineer,  
Data Scientist,  
Linguist, NLP Specialist

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## Expertise



## Fluencies

- Python
  - PyTorch (also tensorflow, keras)
  - Numpy, pandas
  - Nltk, spacy, hugging face
  - Bokeh, seaborn, matplotlib
- Production Applications
  - AWS, Docker
  - Agile, Jira
  - SaaS, APIs

## Experience

- soon** **My Next Position**  
Solve linguistic problems via machine learning in a collaborative and innovative environment.
- 2020–current** **NLP Specialist and MLE** Comcast, AI Discovery, Corti  
I own machine learning projects from ideation to evaluation, including design implementation as well as client communication. The products I support reach millions of users globally every day. See below for project details
- 2017 – 2019** **MS Computer Science** Oregon Health and Science University  
My graduate research focused on computational language representation, taking full advantage of a department well versed in machine learning.
- 2010 – 2015** **BA Linguistics** Reed College  
Here, I thrived in an analytical setting which prioritized scientific rigor, comprehensive study, and deep engagement with and communication of complex topics.

## Projects

- Language Modeling** Corti Voice Platform  
📅 Jan 2021 – Current  
To improve accuracy on misspelled queries, developed a new language modeling component for NLP pipeline
- Improved prediction of misspelled queries from 23% to 42% while maintaining 80% accuracy on the rest of the domain
  - Restructured language processing pipeline, making language modeling a distinct component to better support complex modeling
  - The resulting module has opened new avenues of collaboration and will be used as an independent platform capability.
  - Owned the product development process, a responsibility typically reserved for lead engineers
- Logical Form Prediction Model** Corti Voice Platform  
📅 June 2020 – Jan 2021  
Expanded the capabilities of a complex but unfunctional model to all of our platform's clients
- Upgraded model to efficiently support utterances of arbitrary length with unlimited entities in addition to short, single-entity queries

- Ontology Development** Comcast Xfinity Assistant  
📅 March 2020 – Current  
Improved performance of automated customer assistant through realization of features that the client had previously thought infeasible to adopt
- Developed a structured semantic hierarchy for domain-specific data labeling
  - Completion of each project milestone resulted in immediate and sustained improvement on key metrics (containment rate, classification accuracy).
  - Communicated highly technical concepts and their impacts on individuals to colleagues at all levels of the client organization. This was essential in identifying and removing barriers to effective use of the NLP platform.

June 9, 2021

Kendra Chalkley