

# Anastassia Kornilova

## Work Experience

June 2016 - **Research Scientist**, *FiscalNote*, Washington, D.C.

Present Developing a variety of applications on legislative and regulatory data using ML and NLP techniques. Projects have ranged from rapidly exploring new datasets, to collaborating with Product team to develop new features, to creating production systems.

### Key Accomplishments:

- (*Ongoing*) Exploring different methods for extracting Key Phrases from documents using basic TF-IDF, Elasticsearch's significant terms functionality and EmbedRank (a neural algorithm).
- (*Ongoing*) Created a system for Named Entity Extraction and Matching
  - Supervised two interns on the initial subproject to evaluate how out-of-the-box SpaCy model performs on Congressional Bills and Reports.
  - Trained custom NER models for several legislative datasets using a combination of rules and online learning.
  - Designed an algorithm for mapping extracted entities to canonical database entries.
  - Applied the system to build a prototype for recommending tags (people, organizations) based on users' free-form input notes.
- Led a small team in the creation of a custom taxonomy categories for legislation/policy.
  - Ran internal project meetings and collaborated with product managers on the web platform
  - Created and evaluated methods to label documents with the new topics, including ElasticSearch percolators and ML classifiers.
  - Prototyped features to recommend relevant content to users using the new category data.
- Developed a novel neural networks model to predict how a legislator will vote on a bill.
- Redesigned a key platform service that predicts the likelihood that a bill will pass and provides client-facing explanations. This project consisted of creating an online architecture to replace a legacy batch system, training new models that are easy and efficient to maintain, and designing more intuitive prediction explanations.

Spring 2016 **Teaching Assistant for Introduction to CyberPhysical System**, *Carnegie Mellon*, Pittsburgh, PA.

Summer 2015 **Data Science Intern**, *Khan Academy*, Mountain View, CA.

- Analyzed complex data from Bay Area user engagement event (Learnstorm) and created recommendations for future iterations of the project.
- Built a prototype of a personalized recommendation email to encourage re-engagement with the site.

Summer 2014 **Data Engineering Intern**, *Pinterest*, San Francisco, CA.

## Education

2012-2016 **BS in Computer Science**, *Carnegie Mellon University*, *Pittsburgh, PA*.

Minor: Language Technologies. Phi Beta Kappa

## Research

Summer 2019 Anastassia Kornilova and Vlad Eidelman. *BillSum: A corpus for automatic summarization of US legislation*. In Proceedings of Workshop on New Frontiers in Automatic Summarization at EMNLP.

Summer 2018 Anastassia Kornilova, Daniel Argyle, and Vlad Eidelman. *Party matters: Enhancing legislative embeddings with author attributes for vote prediction*. In Proceedings of ACL.

Summer 2018 Vlad Eidelman, Anastassia Kornilova, and Daniel Argyle. *How Predictable is Your State? Leveraging Lexical and Contextual Information for Predicting Legislative Floor Action at the State Level*. In Proceedings of COLING.

## Volunteer Experience

May 2017 - **Teaching Assistant**, *Technology Education and Literacy in Schools*.

Spring 2018 ○ Assist high school teacher of AP Computer Science Principles by answering students questions during lab time and providing feedback on curriculum.

## Technical skills

Python, SQL, Keras, Tensorflow, Scikit-Learn, Pandas, Elasticsearch, AWS, Git, L<sup>A</sup>T<sub>E</sub>X