

# Natalie Ahn

DATA SCIENTIST · PH.D. CANDIDATE

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## Summary

Data scientist focused on machine learning, natural language processing, and statistical analysis. 5+ years experience in news media and foreign policy, prior to academic research. Interested in opportunities in industry to develop computational, data-driven solutions to societal challenges.

## Education

2018	<b>Ph.D. in Public Policy (expected)</b> , University of California - Berkeley, Goldman School of Public Policy	Berkeley, CA
2006	<b>M.A. in Strategic Studies and International Economics</b> , Johns Hopkins University, SAIS	Washington, DC
2004	<b>B.A. in International Relations (Minor in Computer Science)</b> , Stanford University	Stanford, CA

## Academic Experience

### Goldman School of Public Policy (GSPP), UC Berkeley

Berkeley, CA

PH.D. CANDIDATE, INDEPENDENT RESEARCH

2012 - Present

- Developed open source software tools in Python for data processing and analysis, including for Spanish text morphological analysis, Wikipedia search and entity labeling, person name and document matching, and statistical model sampling and visualization (available on Github).
- Extensive data collection, processing, measurement, and analysis of political institutions and events. Developed NLP/ML ensemble approach to classifying government documents, as well as unsupervised approach to information extraction with multi-task learning in Tensorflow.

PROJECT SUPERVISOR, UNDERGRADUATE RESEARCH APPRENTICE PROGRAM

2016 - 2017

- Supervised research assistants collecting and coding data on political leaders. Mentorship in research methods, including data analysis in R.

GRADUATE STUDENT RESEARCHER, INSTITUTE FOR RESEARCH ON LABOR AND EMPLOYMENT

2014 - 2017

- Administered several national surveys of local politicians. Collected and coded national sample of municipal financial records via FOIA requests. Coded legislative histories of pension governance and actuarial policies. Processed and analyzed U.S. population and local govt census data.

### D-Lab (Data Lab), UC Berkeley

Berkeley, CA

Workshop Instructor: Programming Fundamentals, Python Fundamentals, NLP with NLTK, Intro to Regex

2016 - 2017

### International and Area Studies Program, UC Berkeley

Berkeley, CA

Graduate Student Instructor: Contemporary Political Economy, Intermediate Macroeconomic Theory

2013 - 2014

### Computer Science Department, Stanford University

Stanford, CA

Section Leader (Undergraduate TA, CS198 Program): Programming Methodologies, Programming Abstractions

2001 - 2002

## Professional Experience

### U.S. Department of State and U.S. Embassy in Iraq

Washington, DC and Baghdad, Iraq

INTERAGENCY TRANSITION ADVISOR/FOREIGN POLICY ADVISOR

2010 - 2011

- Served in the Bureau of Near Eastern Affairs in Washington and as State Dept advisor to the Deputy Commanding General of U.S. Forces-Iraq.
- Provided analysis of political developments, supported stabilization and interagency transition efforts to assist U.S. military departure.

POLITICAL-MILITARY AFFAIRS OFFICER

2008 - 2009

- Lead role in planning and implementing key political-military efforts for post-conflict transition in Iraq, including police development, nonproliferation compliance, election security, and militant group reconciliation, working with U.S., Iraqi Government and international partners.

### WashingtonPost.com

Washington, DC

EDITOR AND PRODUCER, POSTGLOBAL

2007

- Coordinated, edited, and published expert panel blog, video blog, and interactive new media forum on foreign affairs.

### Asahi Shimbun

Washington, DC

STAFF REPORTER, WASHINGTON BUREAU

2006 - 2007

- Covered the Pentagon, Senate and House Armed Services Committees, as a local reporter for a leading Japanese daily newspaper.

## Skills

**Programming:** Python, R, C/C++, some Java

**Languages:** Proficient Spanish, intermediate German, beginning Arabic

**Data Science:** numpy, pandas, scipy, scikit-learn, statsmodels, matplotlib, spaCy, CoreNLP, SyntaxNet, Tensorflow, Git, Bash, SQL, AWS

## Papers & Presentations

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[INDUCING EVENT TYPES AND ROLES IN REVERSE: USING FUNCTION TO DISCOVER THEME.](#)

2017. Proceedings of the Workshop on Events and Stories in the News, Association for Computational Linguistics (ACL)

[COMPARING NLP METHODS FOR IDENTIFYING POLICY DECISIONS IN GOVERNMENT DOCUMENTS.](#)

2017. Paper presented at the 2017 PolInformatics Workshop

[RULE-BASED SPANISH MORPHOLOGICAL ANALYZER BUILT FROM SPELL CHECKING LEXICON.](#)

2017. arXiv preprint, arXiv: 1707.07331 [cs.CL], [code](#)

[MEASURING CONSOLIDATION OF POWER: EXTRACTING EVENT DATA FROM LAWS AND DECREES.](#)

2016. Paper presented at the annual meeting of the American Political Science Association (APSA)

## Fellowships & Awards

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**Dissertation-Year Fellowship**, Graduate Division, UC Berkeley, 2017-18

**Outstanding Graduate Student Instructor Award**, UC Berkeley, 2014

**Humane Studies Fellowship**, Institute of Humane Studies, 2013-15

**Graduate Division Summer Grant**, UC Berkeley, 2014

**Faculty Summer Research Grant**, UC Berkeley, 2013

**Policy Fellowship**, Nuclear Science and Security Consortium, 2012-13

**Expeditionary Service Award**, U.S. Department of State, 2011

**Outstanding Civilian Service Award**, U.S. Department of the Army, 2011

## Institutional Affiliations

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**Visiting Researcher**, Pontificia Universidad Católica del Perú (PUCP), Department of Social Sciences, Lima, Peru 2015

**Associated Researcher**, Facultad Latinoamericana de Ciencias Sociales (FLACSO), Dept of Political Studies, Quito, Ecuador 2016

## Professional Activity

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**Reviewer** for the Workshop on Natural Language Processing and Computational Social Science (NLP+CSS), ACL 2017

**Reviewer** for the International Conference on Computational Social Science (IC2S2) 2018

**Member** of the Association for Computational Linguistics, American Political Science Association, and Midwest Political Science Association