

Alexander Spangher

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Objective: Language modeling and knowledge base construction with a focus on journalistic practice/tooling.

EDUCATION	Carnegie Mellon University , Ph.D. Candidate, Electrical Eng. 2018-present Columbia University , M.S. Data Science, M.S. Journalism 2014-2018 Columbia University , B.S. in Neuroscience, B.S. in C.S. 2010-2014
RELEVANT EXPERIENCE	Carnegie Mellon Univ. , Mountain View, CA <i>Ph.D. Student</i> 2018-present <i>Knowledge Graph Construction for NASA Earth Sciences.</i> Text-modeling using hierarchical topic modeling. Visualization/tooling in D3.js. <i>Advisor:</i> Jia Zhang. Microsoft Research , Redmond, WA <i>Research Intern</i> Summer 2018 Large-scale analysis of user-behavior changes in response to misinformation. Crowdsourcing, causal modeling, and data analysis. (See pub.) New York Times , NYC, NY <i>Data Scientist</i> 2014- present <i>Project Feels:</i> Modeled emotions in articles. Data collection: Crowd-sourcing and active learning. Modeling: Deep learning and ensemble methods. Deployment: Google Cloud Services (GKE, Datastore, BigQuery). See: https://open.nytimes.com/how-does-this-article-make-you-feel-4684e5e9c47 . <i>Collaborative Topic Model:</i> Article recommendation-engine, scaled to all users. Modeling: Custom-designed Bayesian extension of LDA. Collab: Dr. David Blei. Deployment: MySQL, WSGI API, Luigi data pipelines. Extensions: multi-armed bandit and contextual bandit algorithms. See: https://open.blogs.nytimes.com/2015/08/11/building-the-next-new-york-times-recommendation-engine/ .
PEER-REVIEWED PUBLICATIONS	Alexander Spangher , Gireeja Ranade, Besamira Nushi, Adam Fourney, Eric Horvitz. Analysis of Strategy and Spread of Russia-sponsored Content in the US in 2017. <i>Submitted: International Conference for Web and Social Media, AAAI.</i> 2018. https://arxiv.org/pdf/1810.10033 Alexander Spangher , Berk Ustin. Actionable Recourse in Linear Classification. <i>Proceedings of the 5th Workshop on Fairness, Accountability and Transparency in Machine Learning.</i> 2018. https://econcs.seas.harvard.edu/files/econcs/files/spangher_fatml18.pdf
LEADERSHIP and ACADEMIC HONORS	New York Times Diversity: <i>Co-chair and Founder:</i> NYT Young Professionals. <i>Contributor:</i> Unpublished Black History https://nytimes.com/interactive/projects/cp/national/unpublished-black-history . Professional Musician: <i>Double Bassist</i> for critically-acclaimed off-Broadway play. Honors: <i>John Jay Scholar</i> and <i>Dean's List.</i> Columbia University. Scholarships: Intel STS Semi-finalist, National Merit Scholarship Media Pub.: <i>The New York Times, Huffington Post, Columbia Journalism Review.</i>
MEDIA MENTIONS	<i>Wired</i> https://www.wired.com/story/what-does-a-fair-algorithm-look-like/ <i>BuzzFeed.</i> https://www.buzzfeednews.com/article/peteraldhous/russia-online-trolls-viral-strategy Languages: Python, SQL, D3.js, Javascript, Java, Scala, C, CUDA. Google Cloud Services, Amazon Web Services.