

# Abram Handler

Assistant Professor, Leeds School of Business  
University of Colorado, Boulder

## Contact

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## Last updated

May 18, 2022

## Areas of interest

Information Systems • Natural language processing • Human–computer interaction • Machine learning

## Education

2021 PhD in Computer Science, University of Massachusetts, Amherst

Thesis: Natural Language Processing for Lexical Corpus Analysis  
Advisor: Brendan O'Connor

2018 M.S. in Computer Science, University of Massachusetts, Amherst

2014 M.S. in Computer Science, University of New Orleans  
Advisor: Vassil Roussev

2007 B.A. in Philosophy, Columbia University

## Refereed Journal Papers (Computer Science)

CLIOQUERY: Interactive Query-Oriented Text Analytics for Comprehensive Investigation of Historical News Archives. **Abram Handler**, Narges Mahyar, Brendan O'Connor. *Forthcoming*, ACM Transactions on Interactive Intelligent Systems (TiiS), 2022.

## Refereed Conference Papers (Information Systems)

Toward an Information Systems Ontology. Roland Müller, Sebastian Hüttemann, Kai R. Larsen, Sen Yan and Abram Handler *DESRIST*, 2022.

## Refereed Conference Papers (Computer Science)

Query-focused Sentence Compression in Linear Time. **Abram Handler** and Brendan O'Connor. *EMNLP*, 2019.

Investigating Sports Commentator Bias within a Large Corpus of American Football Broadcasts. Jack

Merullo, Luke Yeh, **Abram Handler**, Alvin Grissom II, Brendan O'Connor and Mohit Iyyer. *EMNLP*, 2019.

Relational Summarization for Corpus Analysis. **Abram Handler** and Brendan O'Connor. *NAACL*, 2018.

Identifying civilians killed by police with distantly supervised entity-event extraction. Katherine Keith, **Abram Handler**, Michael Pinkham, Cara Magliozzi, Joshua McDuffie, and Brendan O'Connor. *EMNLP*, 2017.

## Refereed Workshop Papers (Computer Science)

Rookie: A unique approach for exploring news archives. **Abram Handler** and Brendan O'Connor. *Data Science + Journalism workshop at KDD*, 2017.

Bag of What? Simple Noun Phrase Extraction for Text Analysis. **Abram Handler**, Matthew J. Denny, Hanna Wallach, and Brendan O'Connor. *Text as Data*, 2016 and *NLP + Computational Social Science workshop at EMNLP*, 2016.

Visualizing textual models with in-text and word-as-pixel highlighting. **Abram Handler**, Su Lin Blodgett and Brendan O'Connor. *Workshop on Human Interpretability in Machine Learning at ICML*, 2016

## Preprints

Human acceptability judgements for extractive sentence compression. **Abram Handler**, Brian Dillon, Brendan O'Connor. *arXiv*, 2019.

## Grants

- 2021 Brian Keegan and Abram Handler. "Payden Teaching Excellence Grant." From The College of Media, Communication and Information, University of Colorado, Boulder.
- 2018 Brendan O'Connor, Abram Handler, Brian Dillon. "Crowdsourced tree edit supervision for flexible sentence summarization and corpus exploration." From Figure Eight, Inc. through the AI for Everyone Challenge.
- 2015 Abram Handler, Steve Myers and Anne Mueller. "Semantic timeline maker." From the Knight Foundation through the Knight Foundation Prototype Fund. (Funded initial development of the ROOKIE system.)

## Awards

- 2020 **Outstanding reviewer award** at ACL and EMNLP conferences
- 2018 **Best reviewer award** at EMNLP conference (top 7%)
- 2015 **Excellence in journalism award**, New Orleans Press Club
- 2007 *Magna cum laude*, Columbia University
- 2006 **Oxbridge scholars program**, Columbia University – Cambridge University
- 2003 **John Jay Scholar**, Columbia University
- 2003-2007 **Dean's list**, Columbia University (five semesters)

## Teaching and mentoring

UNIVERSITY OF COLORADO, BOULDER • DEPARTMENT OF INFORMATION SCIENCE (INFO)

Instructor of record

- 2021 INFO 2301 Quantitative reasoning (delivered twice in 2021)
- INFO 3401 Information exploration
- INFO 4604 Applied machine learning (delivered twice in 2021)
- INFO 3402 Information exposition
- INFO 4700 Senior capstone
- 2020 INFO 2301 Quantitative reasoning
- INFO 3401 Information exploration
- INFO 4604 Applied machine learning

UNIVERSITY OF MASSACHUSETTS, AMHERST • MANNING COLLEGE OF INFORMATION AND COMPUTER SCIENCES

- 2019 Classroom instructor, Ethics and Artificial Intelligence (four sections)
- 2018 - 2019 Student advisor, UMass Industry Mentorship Program (two semesters)
- 2017 Summer graduate coordinator for the REUMass program for undergraduate researchers
- 2016-2018 Teaching assistant for graduate courses in graphical models and natural language processing (three semesters)
- 2016 Mentor to Michael Pinkham, visiting undergraduate researcher

## Invited talks

### **Designing the ClioQuery Text Analytics System**

- 2022 Leeds School of Business, University of Colorado, Boulder

### **Using Phrases for Corpus Analysis**

- 2022 Online tutorial series, [NLP+CSS 201: Beyond the Basics](#), Virtual

### **Natural Language Processing for Lexical Corpus Analysis**

- 2021 Lab meeting, Natural Language Processing Group (CompSem), University of Colorado, Boulder

### **Natural Language Processing for Corpus Analysis**

- 2020 Seminar, Department of Information Science, University of Colorado, Boulder
- 2020 Lab meeting, Natural Language Processing Group (CompSem), University of Colorado, Boulder

## Software Projects and Artifacts

### 2020-present **CanvasCLI**

An opinionated command-line interface for the Canvas learning management system.

<https://github.com/AbeHandler/CanvasCLI>

### 2020 **wmasscovid.com**

A website offering automatically-updated COVID statistics for Western Massachusetts. The site received thousands of visitors during the first months of the COVID pandemic.

### 2016 **Phrasemachine**

A Python package for finding phrases, with hundreds of users from around the world.

<https://github.com/slanglab/phrasemachine>

2014-2015 **Live election maps**  
Leader of technical team which produced the first three live election maps in Louisiana.  
<http://elections.thelensnola.org>

2014 **Document Cloud (Doc Split)**  
Open source contributor: added support for the Tesseract rotation detection plugin.  
<https://www.documentcloud.org>

## Work Experience

2022-present **University of Colorado**, Assistant Professor, Leeds School of Business, Boulder, CO  
- Tenure-track faculty member with the Organizational Leadership and Information Analytics group.

2020-2022 **University of Colorado**, Instructor, Department of Information Science, Boulder, CO  
- Instructor of record for three courses each semester (see [Teaching and mentoring](#) section).

2015-2020 **University of Massachusetts**, Research assistant and teaching assistant, Amherst, MA  
- Conducted both individual and group research projects as member of SLANG lab.

2019 **BuzzFeed**, Data science intern, New York, NY  
- Contributed to internal API for analyzing user comments.  
- Developed a new method for detecting entity aliases, using comment data.

2018 **Agolo**, Natural language processing research intern, New York, NY  
- Implemented state-of-the-art sentence compression technique in PyTorch.  
- Developed a new method for summarizing entity relationships in news corpora.

2014-2015 **The Lens**, Software developer and data journalist, New Orleans, LA  
- Cofounder and technical leader of news applications team.  
- Produced interactive web stories.  
- Analyzed heterogeneous textual records to programmatically identify corruption.

2013 **C4 Tech and Design**, Software developer, New Orleans, LA  
- Worked as full-stack web developer using PHP, Git, Drupal, Javascript, CSS and HTML.

2011-2013 **Louisiana Office of Public Health** (Acadiana CARES), Software developer, New Orleans, LA  
- Successfully refactored a mission-critical system for collecting and monitoring electronic lab reports.

2010 **Jefferson Parish Public Schools**, Digital Opportunity Trust intern, Gretna, LA  
- Helped develop a new personnel system in PHP, SQL, CSS, HTML and JavaScript.

2007-2009 **The Bronx Defenders**, Investigator, Bronx, NY  
- Assisted attorneys at a *pro bono* legal clinic.

2006 **Benenson Strategy Group**, Intern, Manhattan, NY  
- Taught myself to program by automating routine tasks in Microsoft Excel.

## Professional Service

### **Committee Member**

Department of Information Science (INFO), University of Colorado, Boulder

As a member of INFO's Academic Review and Planning Advisory Committee (2021), I was responsible for collecting and presenting information about the INFO's undergraduate course offerings as part of the Department's seven-year program review.

As a member of INFO's Undergraduate Committee (2020-2021), I helped make decisions about the Department's undergraduate course offerings.

### **Reviewer**

EMNLP (2017-2021), ACL (2019-2021), ACL ARR (2021), NAACL (2019,2021), AACL (2020), WNUT (2019), New Frontiers in Summarization (2019, 2021), ICWSM (2018-2020)

## Graduate Coursework

Machine Learning, Natural Language Processing, Deep Learning, Advanced Algorithms, Theory of Computation, Graphical Models, Reinforcement Learning, Programming Languages, Statistical Machine Learning.