Coen D. Needell

Résumé

 +1 (970) 456 2411
 coen@needell.org
 coen.needell.org
 SoyBison
in coen-needell-b4503216a

Overview

Computationally and Scientifically Driven Quantitative Researcher. 3+ years of experience in Computational Social Science building research systems for academic and industry labs, with multiple projects in parallel. Strong focus on foundational methods for computational social science. Wide array of skills and experience at different stages of the research process, including web scraping, human trials, data warehousing and architecture, exploratory data analysis, machine learning, and data visualization. Fast learner, and dedicated to the scientific endeavor. Passion for the process of applying computational methods to the real world.

Education

2019 – 2021   **Master of Arts in Computational Social Science**, *University of Chicago*, Chicago, IL, GPA: 3.80
Thesis on Deep Learning and Human Memory.

2015 – 2019   **Bachelor of Arts in Economics and Physics**, *Washington University in St. Louis*, St. Louis, MO, GPA: 3.41
Minor in the Philosophy of Science

Experience

2023 –   **Freelance Researcher**, *University of Chicago, Department of Psychology*, Chicago, IL
Built apparatus for data gathering on older adults and people with mild cognitive impairments with David Gallo. Developing a novel approach for estimating auditory memorability with Wilma A. Bainbridge.

2022 –   **Predoctoral Researcher**, *Computational Social Science, University of Pennsylvania*, Philadelphia, PA
Researched topics relating to the News, especially how the apparent "Speed of News" has been increasing, how economic narratives are presented in the media, and how stories are framed using quotations to "launder" extreme views. Developed the *Living Journal Toolkit*, a collection of tools for publishing live updating dashboards associated with papers, blog posts using a novel statistical and visualization package, and interactive papers. Developed the *News Observatory*, a system for monitoring news websites and collecting analyzable data about their publication behavior.

2021 – 2022   **Predoctoral Researcher**, *Microsoft Research Lab – New York City*, New York, NY
Researched topics related to the News: how events are framed by different publishers, the length of the news cycle, and people's perceptions of factualness. Researched the process of conversion due to advertising. Teaching assistant for the MSR NYC Data Science Summer School.

2020 – 2021   **Research Assistant**, *University of Chicago: Brain Bridge Lab*, Chicago, IL
Researched the efficacy of deep learning techniques to estimate the probability that a subject will remember an image. Used these models to create a better understanding of the features of an image that are common among highly memorable images. Developed *ResMem*, a novel deep-learning based model to estimate the memorability of images. With Prof. Wilma A. Bainbridge.

2020 – 2021   **Research Assistant**, *University of Chicago: Memory Lab*, Chicago, IL
Developed an online experiment to generate pilot data for the development of a computer assisted testing program for cognitive decline. Built in JSPsych and tested on prolific and a selection of older adults through a partnership with Rush University, the experiment is designed to see if sufficient information about one's cognitive state can be extracted with a minimal amount of memory and cognitive tests in a number of domains. With Prof. David Gallo.

2019 **Freelance Data Scientist**, *Upwork*, St. Louis, MO and Chicago, IL
Offered freelance data analysis services to companies. Projects include building systems for automatic time-series analysis, data visualization and analysis, natural language processing analysis of surveys, and consulting on larger projects. **Jobs Included:**
○ Interviewing Potential Full-Time Data Scientists
○ Building Statistical Learning Tools
○ Natural Language Processing Analysis
○ ML Model Development and Deployment

Skills

Machine Learning	Natural Language Processing	Data Mining
Network Analysis	Statistics and Statistical Learning	Deep Learning
Cloud Computing	Web Development	Unix
Data Visualization	Data Scraping	Philosophy of Science
Econometric Models	Systems Analysis	Advanced Mathematics

Languages, Packages, and Frameworks

Python	JavaScript	Julia
R	Stata	Mathematica
NLTK	PyTorch	Sci-kit Learn
SciPy	Numpy	Pandas
D3.js	MatPlotLib	ggplot2
Linux	Rust	Haskell
SQL	AWS	Kubernetes