Joseph Denby

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EDUCATION

The University of Chicago — Chicago, IL
M.A. Computational Social Science — Sept. 2017 – Jun. 2019 (expected)
Thesis Advisor: Daniel Yurovsky

Cornell University — Ithaca, NY
B.A. (Hons) Psychology & Philosophy — Aug. 2013 – May 2017
Thesis Advisor: Shimon Edelman

University of Oxford — Oxford, UK
Visiting Student: Philosophy, Psychology, & Linguistics — Oct. 2015 – Jun. 2016

PRESENTATIONS

Denby, J. & Yurovsky D. (2019) *Predicting early language development with linguistic alignment. (In progress).*

Denby, J. & Yurovsky, D. (2018) *Children's books as a unique source of language input.* Poster presented at the Midwest Cognitive Science Conference, Bloomington, Indiana.

AWARDS

University of Chicago Social Sciences Fellowship 2017-2019
Phi Beta Kappa 2017
Outstanding Graduating Senior 2017
Halpern & Rosevear Undergraduate Research Grant 2016
Visiting Studentship at St. Anne's College, University of Oxford 2015-2016

PROJECTS

Children's Book Analysis *2017-2018* Github

— Designed and implemented linguistic analyses on a prominent corpus of children's picture books
— Discovered new low-level differences between picture book text and child-directed speech
— Offered new insights into how picture books can mitigate SES-based outcome disparity

Hawkwatchers *Winter 2018* Github

— Analyzed Federal Open Market Committee press releases using Natural Language Processing
— Predicted Federal interest rate fluctuations by applying Machine Learning to text data
— Accurately categorized 87% of interest rate changes between January 2016 – January 2018

SateLIFE *Spring 2018* Github

— Surveyed satellite imagery of Brazzaville and Kinshasa sourced from Google's Earth Engine
— Leveraged Cloud Computing platforms to perform complex statistical analyses
— Drafted Bash scripts to automate cloud virtual machine initialization and data pipelining

LDP Alignment *2017-2018* Github

— Conducted inferential statistical analyses on a large natural language dataset
— Hypothesized and generated Bayesian hierarchical models for linguistic alignment using Stan

PROFESSIONAL EXPERIENCE

84.51° — Chicago, IL
Data Scientist Intern — Jun. 2018 – Aug. 2018

— Overhauled the firm's 'Exception Reporting' method to identify underperforming segments
— Instituted novel time series Anomaly Detection algorithm - detected $127m worth of notable sales
— Collaborated with Kroger's pharmacy dept. to detect and prevent prescription abandonment
— Developed a Random Forest classification model - outperformed previous method by $17m

SKILLS

Programming:	Python (`numpy, pandas, seaborn, sklearn`, etc.), R (`tidyverse`), SQL, Bash/Linux, C, MATLAB, Markdown, LaTeX, Stan, Git
Techniques:	Natural Language Processing, Statistical Analysis, Modeling, Machine Learning, Deep Learning, Parallelization (MapReduce, MPI), Data Munging, Data Visualization, Experimental Design, Simulation, Webscraping
Languages:	French (fluent)