

NICK MCKENNA

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FIND ME:
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github.com/nighttime

CURRENTLY: *Master's student in Artificial Intelligence and researcher in Natural Language Processing. Linguistics and big data enthusiast. Seeking opportunities for Fall 2019.*

EDUCATION



UNIVERSITY OF EDINBURGH

M.Sc. Artificial Intelligence, Aug 2019
Natural Language Processing Specialism
Edinburgh, United Kingdom



BROWN UNIVERSITY

B.Sc. Computer Science, 2017
Providence, RI, United States

SELECTED COURSEWORK

Accelerated NLP · NLU & Translation
Machine Learning · Deep Learning
Formal Semantics and Pragmatics

RESEARCH EXPERIENCE

Research in Computational Semantics

Advised by Prof. Mark Steedman. Oct 2018 - Present

My work is in the entailment project, which seeks to build a graph of predicates that entail, paraphrase, and presuppose each other using machine learning methods.

- **Master's dissertation** on a novel approach for negation detection, a subtask in semantic parsing.
- Concurrent research on detection of presuppositions using negated relations in the entailment graph.

NLP+CogSci Research Blog

Research on word representation semantics.

Read it here: nmckenna.me/research

Brown Computational CogSci Reading Group

Led by Prof. Ellie Pavlick. Summer 2018

Reviewed current research in language processing and models of concept learning.

SKILLS

- Linguistic analysis of syntax, semantics, and pragmatics; and design of practical computer models for automatic language understanding.
- Data analysis with SQL & Python numerical libraries.
- Skilled with ML frameworks: PyTorch, TensorFlow, and Keras; Proficient in Python, C++, Java, Swift/iOS.

IMPACT

Teaching Assistant, Brown 2015 - 2017

Hands-on with 570 students over 4 Computing courses. Designed curriculum, graded work, and held office hours.

Sponsorship, Hack@Brown 2015 - 2017

Raised \$45,000 for Brown's annual hackathon from partners Google, Microsoft, TwoSigma, and others.

PROFESSIONAL EXPERIENCE



TAPTOBOOK *Product Manager* June 2017 - Aug 2018

- Directed the product development roadmap. Identified business needs, researched solutions, and prioritized work for the 10-person development team.
- Overhauled the core business model with new technologies and user experiences, separating TTB from competing products. The company is now profitable and growing rapidly.
- Analyzed product and business data for strategic development initiatives. Directed and launched several AI-powered features to maximize our customers' productivity and revenue.



YELP *Product Management Intern* Summer 2016

- Experimented with ML Group, growing review highlights engagement by 13%. Conducted extensive data analysis in SQL for product planning.



YELP *Engineering Intern* Summer 2015

- Built research-driven manager for Yelp Reservations on iPad, reducing restaurant hosts' time spent by 88%.

PAST PROJECTS

Document Summarizer, Python & TensorFlow

Algorithm for extractive summarization using a deep convolutional neural network to identify the most sentimental sentences, based on Google DeepMind paper.

Deep Q-Network for Virtual Soccer, Python & PyTorch

Reinforcement algorithm with neural Q-function approximation for player control.

High-Frequency Trading Agent, Java

Automatic trading algorithm for a simulated market. Traded securities with 14 agents for net-positive, 2nd best outcome in the competition.

StingRay Renderer, OpenGL & C++

Real-time GPU raytracer that renders interactive 3D scenes using alternative on-device caching to accelerate render time.

Two to Infinity, iOS 16,000 Downloads

Mobile game based on 2048. Ranked Top 100 Strategy Games in US and Canada.