JACOB BREMERMAN

CAREER OBJECTIVE

I am currently a graduate student in computer science with a background in physics, mathematics and linguistics. My research focus is machine learning and natural language processing, particularly in their applications to language education. I am looking for internship positions as a programmer, analyst or researcher, ideally with a focus in natural language processing and/or machine learning.

TECHNICAL SKILLS

- Machine learning models (DAN, LSTM) with PyTorch and Tensorflow for NLP applications
- Data analysis and statistics with Python, R, Excel and MATLAB
- Information retrieval system development using elasticsearch, lucene, kibana
- Application development on Android and Amazon Alexa using Java and Node.js
- VR video game development in Unity
- Basic webpage development (HTML, CSS, JavaScript)
- Beginner experience in C# and SQL

LANGUAGE SKILLS

- Fluent: English and Spanish
- Near-Fluent: French
- Advanced: German
- Intermediate: Italian, Portuguese and Korean
- Novice: Persian and Japanese

CONTACT INFORMATION

- Mobile: (240) 671-9000
- Email: jacob.bremerman@gmail.com
- Website: bremerman.me
- LinkedIn: linkedin.com/in/bremerman
- Github: github.com/Jakebob13

RESEARCH POSITIONS

UNIVERSITY OF MARYLAND, CLIP LAB

Research Assistant (August 2019-Present)

- Graduate student researcher in the Computational Linguistics and Information Processing (CLIP) Lab
- Currently continuing NER-augmented information retrieval project from HLTCOE (below)

JOHNS HOPKINS, HLTCOE

Research Intern (May 2019-August 2019)

-Machine Learning researcher for projects involving NER-augmented queries for improved IR and an NER model that incorporates user feedback for online learning

MACHINE LEARNING PROJECTS

HUMAN FEEDBACK QUESTION ANSWERING

- Trained a DAN that answers quizbowl trivia questions using data from human responses along with a modified loss function in addition to gold label training data

CODE SWITCHING SENTIMENT ANALYSIS

- Current project using "Hinglish" and "Spanglish" tweets tagged for sentiment to train a classifier that is robust to input from code-switching data

PREDICT NATIVE LANGAUGE FROM L2 DATA

-Current project to predict an L2 speaker's native language and the most accented segments of speech by feeding phone-aligned L1 data from multiple languages to a language classifier and testing on L2 data

MACHINE LEARNING QUANTUM ALGORITHM

- Current project to implement Grover's search, a quantum algorithm, to speed up a k-nearest neighbors search for a language model pipeline

EDUCATION

UNIVERSITY OF MARYLAND, COLLEGE PARK

Master of Science (August 2019-May 2021)

- MS in Computer Science focus in NLP, AI, Data Science

Bachelor of Science Continued Education (2018-19)

- Enrolled in undergraduate Computer Science courses

Bachelor of Science and Bachelor of Arts (2013-17)

- BS/BA in Physics and Spanish Linguistics and minor in Mathematics with a final GPA of 3.8
- Thesis on piezoelectric touchscreen proof of concept