Simon Zeng

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EDUCATION

Johns Hopkins University, Baltimore MD   May 2020
> Bloomberg Scholar ($19000 over 4 years)
> *Majors:* Computer Science, Cognitive Science | *Minor:* Applied Mathematics and Statistics
> *Focus:* Natural Language Processing | *GPA/Major GPA:* 3.21/3.14

TECHNICAL SKILLS

> Proficient in Java, C, Python (including TensorFlow, Keras, Matplotlib, NumPy, Pandas libraries)
> Familiar with C++, Lambda Notebook, MATLAB, Android/Web Development Tools/Frameworks:
> *Frontend:* Javascript (FW: Angular, React) | *Backend:* SQL, Node.js, PHP

PROFESSIONAL EXPERIENCE

Independent Research Project | Johns Hopkins University | Baltimore MD   Aug 2018 - Present
> *Advisor:* Dr. Charbel Rizk | *Sponsor:* Textron Systems
- Investigating the usage of hyperspectral imaging in non-invasive food allergen detection to create a commercially viable product
- Utilizing machine learning and deep learning techniques to develop a pixel-by-pixel detection algorithm that takes an image of a food product and determines the presence of certain food allergens in a timely manner

Research Assistant | Johns Hopkins University | Baltimore MD   Feb 2018 – Present
> *Department:* Cognitive Science
- Leading effort to analyze the effects of bilingualism on novel word processing by utilizing jabberwocky sentences.
- Creating a computational model of human parsing that explains the human capability to grammaticize novel words.

Software Development Intern | Bloomberg School of Public Health | Baltimore MD   May 2018 – Aug 2018
- Created tools (Python, ASP, ASP .NET) utilized in the maintenance and analysis of the Epidemiology Dept's clinical and personnel data to increase efficiency both in terms of intradepartmental communication and attaining clinical results
- Transitioned the department's online forms and database resources to support Chrome usage
- Proposed for department to build and use a progressive web app in order to minimize data entry and improve client accessibility to obtain more accurate and reliable results

COMMUNITY INVOLVEMENT

Undergraduate Teaching Assistant | Johns Hopkins University | Baltimore MD   Aug 2018 – Present
> *Courses:* Intro Programming in Java, User Interfaces and Mobile Applications
- Supporting the courses through providing coursework feedback and reinforcing lecture material with students one on one.
- Acting as scrum master and mentor for various groups as they develop their own Android applications. Providing both UI/UX feedback and implementation guidance as necessary

Head of Family Volunteer | Thread | Baltimore MD   Sep 2016 – Present
- Forming sustaining relationships with underperforming high school students confronting significant barriers outside of the classroom to foster the students' academic advancement and personal growth
- Acting as an intermediary link between a group of five volunteers plus a student and upper management to find and access Baltimore-based resources to promote the student's success

PROJECTS

Neural Machine Translation System | Natural Language Processing Project (Python)   Jan 2019 – Present
- Implementation of a seq2seq neural machine translation model with an attention mechanism for French-English translation. Built using Tensorflow and trained on the Europarl Parallel Corpus dataset, it features multi-layer Long Short-Term Memory recurrent neural networks as an encoder (bidirectional) and decoder (unidirectional) as well as beam searching to improve performance.

Amazon Review Sentiment Analysis | Data Analysis/Machine Learning Project (Python)   Dec 2019 – Jan 2019
- Analysis of Amazon reviews of Android Apps using Pandas and Matplotlib libraries. Includes a logistic regression model (Sklearn library) to predict whether a given review has positive or negative connotations.

FoodLab | Android Mobile Application (Java)   March 2018 – May 2018
- App that provides recipes when given ingredients by the user. Recipes can be sorted by relevancy, time needed and rating. Utilizing the Spoonacular API, it provides an avenue for users to exchange tips and ratings on dishes in an open forum environment.

EXTRACURRICULARS & OTHER INFORMATION

Extracurriculars: JHU Undergraduate Admissions (*PR Staff*), Chinese Student Association (*Culinary Chair*), Club Tennis
Languages: Mandarin Chinese (Fluent), French (Limited Working Proficiency), Spanish (Limited Working Proficiency)
Interests: Preparing Sushi, NLP Research Blogging, Bartending, Cooking, Baking