**jasonbak.me** linkedin.com/in/jasonjbak github.com/jasonbak jason.j.bak@gmail.com

### **EDUCATION**

### **Carnegie Mellon University**

B.S., Stats/Machine Learning '19 minor in computer science minor in chemistry

## **RELEVANT COURSEWORK**

#### COMPUTER SCIENCE

Graduate Machine Learning
Parallel Algorithms\*
Computer Systems
Algos and Adv. Data Structures\*
Imperative Programming
Functional Programming
Software Design

### STATISTICS / MATH

Practical Data Science Modern Regression\* Statistical Inference Probability Theory Discrete Math

## **SKILLS**

### **PROGRAMMING LANGUAGES**

Python, Java, C/C++, JavaScript

### **TOOLS & FRAMEWORKS**

Angular2, Jekyll, Git, Vim, HTML/CSS, LATEX

## **DESIGN PROCESS**

Sketch, wireframing, paper prototyping, storyboarding

### **HONORS & AWARDS**

Feb 2<sup>nd</sup> Place (\$1024), Overall

'17 HopHacks

Feb APT Sponsor Award (\$600)

'17 TartanHacks

Mar JSHS Program Scholarship

'15 Department of Defense

Mar National JSHS, Presenter

'15 National Junior Science and Humanities Symposium

Mar 2<sup>nd</sup> Place, Overall

'15 New York Junior Science and Humanities Symposium

#### **EXPERIENCE - INDUSTRY**

a Amazon seattle, wa

# software developer engineer intern, ai algorithms

summer '18

- · Implemented internal shingling of data for the Random Cut Forest (RCF) library.
- · Extended an API to granulize RCF scores to provide per-dimension values.

# **Fulcrum Global Technologies**

chicago, il

legal software developer intern

summer '17

- · Worked with MarkLogic and SQL to create an engine to standardize dirty data.
- · Built a dynamic model of a law firm using ASP.NET Entity Framework.
- · Designed and built legal dashboards using ASP.NET MVC and DevExpress.

# **EXPERIENCE - ACADEMIA**

# 뚪 Institute for Software Research

pittsburgh, pa

research assistant

spring '18

· Partitioned deep neural networks across devices to lower energy consumption.

# Carnegie Mellon School of Computer Science

pittsburgh, pa

teaching assistant

fall '17

Led labs, held office hours, and graded coursework for:

CS 15-122, Principles of Imperative Programming (i.e., Data Structures)

# W University of Washington

new york, ny

research assistant (remote)

spring '14 - spring '15

- · Automated analysis and organization of data on an FTP server.
- · Experimentally corrected instrumentation bias of air temperature readings.

#### **PROJECTS**

**Analysis of my personal journal** [Python, NTLK, Stanford CoreNLP, TextBlob, textgenrnn] Analyzed my personal journal of four years (350+ pages) to identify trends that promote happier writing, which may be correlated to a happier life.

## Keyboard-based tab navigation Chrome extension

are made accessible via the Nexus API and web client.

[ JavaScript, HTML/CSS ]

Enables users to quickly navigate between tabs with highly-customizable keyboard shortcuts. Removes the need for searching through a haystack of tabs and making tabs of websites already open.

Knowledge graph of political nexus [Spark, Kafka, NLTK, Neo4j, ElasticSearch, Flask, Angular2] Streams news articles in real-time and tags related entities. After constructing knowledge graphs, hidden connections between businessmen, politicians, etc.

Messenger-based political assistant bot [Django, api.ai, NLTK, Microsoft Cognitive Services]
Provides a political news digest to users upon request across FB Messenger.
Based on the citizen's interests and values, they can seamlessly contact their senators, donate to causes, or get involved in local activism to make a difference.

HOBBIES: Long-distance running, digital photo/videography, journaling, tennis.

\* denotes in-progress

Updated 08/28/18