**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\*
Computer Systems
Imperative Programming
Functional Programming\*
Software Design
Python Programming

### STATISTICS / MATH

Practical Data Science\* Statistics Theory\* Probability Theory Discrete Math Linear Algebra

### **SKILLS**

### **PROGRAMMING LANGUAGES**

Java, Python, C, JavaScript

### **TOOLS & FRAMEWORKS**

Angular2, Jekyll, Git, Vim, HTML/CSS, LAT<sub>F</sub>X

# **DESIGN PROCESS**

Sketch, wireframing, paper prototyping, storyboarding

# **HONORS & AWARDS**

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

17 норнаскѕ

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

\*denotes in-progress

#### **EXPERIENCE - INDUSTRY**

**4** Amazon incoming software developer engineer intern

seattle, wa

summer '18

# **Fulcrum Global Technologies**

chicago, il

legal software developer intern

summer '17

- $\cdot$  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**

# Institute for Software Research

pittsburgh, pa

research assistant

spring '18

· Partitioning 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**

# 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.

# Password security proof-of-concept program

[Python]

Collects and analyzes handwriting tendencies of different users. It is able to successfully differentiate between a profiled user and an imposter using a self-written k-NN algorithm with less than 20 training instances per character.

HOBBIES: Long-distance running, digital photography, journaling, tennis, guitar.

Updated 02/21/18