**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

### **COURSEWORK**

Computer Systems\*\*
Imperative Programming
Software Design
Discrete Math\*\*
Probability Theory\*\*
Python Programming

### **SKILLS**

### **PROGRAMMING LANGUAGES**

Python, C, JavaScript

### **TOOLS & FRAMEWORKS**

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

## **DESIGN PROCESS**

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

Apr 1<sup>st</sup> Place (\$150), Earth and

'14 Environmental Sciences
WAC Invitational Science Fair

May 1<sup>st</sup> Place, Earth and

Environmental Sciences

NSF Noyce Science Fair

### **EXPERIENCE**

## **Carnegie Mellon School of Computer Science**

pittsburgh, pa

### teaching assistant

fall '17

Lead labs, hold office hours, and grade coursework for:

[fall '17] CS 15-122, Principles of Imperative Computation (i.e., Data Structures)

### **Fulcrum Global Technologies**

chicago, il

# legal software developer intern

summer '17

Team: DataZoo

- · Worked with MarkLogic and SQL to create an engine to standardize dirty data.
- · Used ASP.NET Entity Framework to build a dynamic model of a law firm.
- · Built dashboards for legal manager professionals using DevExpress.

## **University of Washington**

new york, ny

## research assistant (remote)

spring '14, fall '14, spring '15

- · Automated analysis and organization of data on an FTP server from the National Oceanic and Atmospheric Administration (NOAA) station at Barrow, Alaska.
- $\cdot$  Results were used to experimentally correct instrumentation bias of Arctic air temperature readings from the 1850s.

## St. John's University

queens, ny

# research assistant in polymer nanostructures

summer '14

· Devised a time efficient and green method for synthesizing polymer composites coated with gold nanoparticles (AuNPs).

### **PROJECTS**

### Keyboard-based tab navigation Chrome extension

[ 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, tagging related entities in text. After constructing knowledge graphs, hidden insights regarding specific businessmen, politicians, etc. are made publically accessible through the Nexus API and client.

### Messenger-based political assistant bot

[Django, api.ai, NLTK, Microsoft Cognitive Services]

Provides a political news digest to users upon request across the Facebook Messenger interface. 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 less than 20 training instances per character.

#### **HOBBIES**

Long distance running, digital photography, journaling, guitar.

Updated 08/28/17

<sup>\*</sup> denotes intended

<sup>\*\*</sup> denotes in-progress