

# JASON BAK

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## EDUCATION

### Carnegie Mellon University

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

## COURSEWORK

Imperative Programming  
Software Design  
Statistical Methods  
Discrete Math  
Cognitive Psychology  
Python Programming

## SKILLS

### PROGRAMMING LANGUAGES

C, Python, Java, C#

### TOOLS & FRAMEWORKS

Django, Angular2, HTML/CSS, Vim,  
Git, L<sup>A</sup>T<sub>E</sub>X

### DESIGN PROCESS

Wireframing, paper prototyping,  
storyboarding

## HONORS & AWARDS

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

Feb '17 **APT Sponsor Award (\$600)**  
*TartanHacks*

Mar '15 **JSJS Program Scholarship**  
*Department of Defense*

Mar '15 **National JSJS, Presenter**  
*National Junior Science and Humanities Symposium*

Mar '15 **2<sup>nd</sup> Place, Overall**  
*New York Junior Science and Humanities Symposium*

Apr '14 **1<sup>st</sup> Place (\$150), Earth and Environmental Sciences**  
*WAC Invitational Science Fair*

May '14 **1<sup>st</sup> Place, Earth and Environmental Sciences**  
*NSF Noyce Science Fair*

\* denotes intended

## EXPERIENCE



### Carnegie Mellon School of Computer Science

pittsburgh, pa

#### incoming teaching assistant

fall '17

Will lead recitations/labs, hold office hours, and grade coursework for:

[fall '17] CS 15-110, Principles of Computing

### Fulcrum Global Technologies

chicago, il

#### legal software developer intern

summer '17

Team: DataZoo

- Created an ontology for MarkLogic GraphDB using OWL, RDFS, and SPARQL.
- Developed dynamic models of law firms using code-first Entity Framework in C#.

### W University of Washington

new york, ny

#### research assistant (remote)

spring '14, fall '14, spring '15

- Developed a program to automatically analyze and organize data from an FTP server from the National Oceanic and Atmospheric Administration (NOAA) station at Barrow, Alaska.
- Data 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).
- AuNP conjugated polymer composites were tested for their catalytic and artificial enzyme properties.

## PROJECTS

**Nexus** | devpost.com/software/nexus [Spark, Kafka, NLTK, Neo4j, Elasticsearch, Flask, Angular2]

Nexus 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.

**Doug** | devpost.com/software/doug [Django, api.ai, NLTK, Microsoft Cognitive Services]

Doug 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.

**PasswordProtect** | github.com/jasonbak/15112project [Python]

PasswordProtect 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 07/06/17