

Julianne K. Zech

EDUCATION

Georgetown University

Bachelor of Arts in Computer Science & Mathematics

Washington, D.C.

May 2020

- **GPA:** 3.88 / 4.00
- **CS Courses:** Algorithms, Advanced Java Programming, C++ Programming Levels 1 & 2, Big Data Analytics, Data Mining, Data Structures; audited PHD-level Machine Learning Seminar
- **Math Courses:** Applied Statistics, Linear Algebra, Multivariable Calculus, Number Theory & Cryptography, Proofs & Problem-Solving, Time Series in R

WORK & LEADERSHIP EXPERIENCE

Dr. Lisa Singh's Data-Centric Computing Lab

Research Assistant

Washington, D.C.

January 2019 - Present

- Developing text mining algorithm in Python to augment a dictionary of experience words and phrases that will be used to classify Tweets about the #metoo movement as a personal experience, someone else's experience, or not an experience using n-grams and part-of-speech tagging

Greenwich Associates

Data Analyst Intern

Stamford, CT

May – July 2018

- Worked with Investment Management team for leading global provider of proprietary market research and advisory services to the financial services industry
- Developed statistical visualizations and built data processing pipelines for web survey responses from 3,000+ pension funds, foundations, and other institutional investors in 70 countries

The Hilltop Microfinance Initiative

Director of Digital Operations

Washington, D.C.

January 2017 – Present

- Lead 3-person digital team for student-run 501(c)(3) non-profit microfinance organization with \$76,700 in assets and \$45,000+ in historical loans to low-income entrepreneurs in D.C., Maryland, and Virginia
- Developed [new website](#) with integrated payment processing and news stream on WordPress platform
- Analyze website traffic and present recommendations for targeted advertisements to marketing team

Computer Science Student Advisory Committee

Undergraduate Representative

Washington, D.C.

September 2018 – Present

- Recommend improvements to academic curriculum and student resources to the Director of the Computer Science department; 1 of 3 undergraduate computer science majors selected by faculty to the committee

SELECTED PROJECTS

[Naïve Bayes Classifier](#): Data Mining Class

January – February 2019

- Developed a Naïve Bayes data mining engine in Python to classify 50,000 records based on income
- Replaced missing values by average of the class label, implemented entropy-based discretization for numeric features, and used 10-fold cross-validation to assess accuracy

[Wikipedia Article Analysis](#): Big Data Analytics Class

March 2019

- Pre-processed 70 GB file of all text currently on Wikipedia (articles, stubs, redirects, and disambiguation pages), and extracted article titles and text using Scala's XML parser and regular expressions
- Performed a count of each unique word in articles using Apache Spark RDD actions and transformations

SKILLS, ACTIVITIES & INTERESTS

Technical Skills: Proficient in C++, Java, Python (numpy, pandas, nltk, scikit-learn), and R; familiar with Apache Spark and Scala

Activities: GU Women Coders (participate in coding workshops), GU Eating Society Director of Outreach (forge partnerships and organize events with D.C. restaurants)

Interests: Cooking Syrian food, Golfing, Hiking in the Amazon