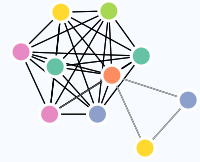


# BRIAN BLAKELY

I have developed Python libraries which have decreased data processing computation time by over 200%<sup>1</sup>, which has helped many researchers explore geospatial data quickly, created software to accurately track your pupils in real time in Python<sup>2</sup> to help my disabled, late friend play video games easier, and generated a fairly popular data set containing the lyrics of all top 100 songs in the last 60 years<sup>3</sup>.

Currently searching for a position that allows me to build tools leveraging multithreading, machine learning, and software engineering to help business and researchers explore and understand their data quickly and easily. I have a special interest in the application of topological data analysis.



## EDUCATION

2021  
|  
2016

- **B.S., Computer Science, Mathematics**  
Bowling Green, OH Bowling Green State University
  - Double majored in Computer Science and Mathematics.
  - Major GPA: 3.7
  - Honors & Awards: Dean's List

## RESEARCH EXPERIENCE

2021  
|  
2020

- **Undergraduate Data Science Researcher**  
Applied Statistics Department Bowling Green State University
  - Collaborated with a team of seven members for three over semesters to research multiple different areas of Covid-19 related data science research.
  - Researched areas such as; Covid-19 variable importance measures, MSA level sentiment analysis of tweets, multi-signal predictive model by county, and more.
  - Full stack data scientist: Fully automated the collection & processing of various different data sources, then built models to analyze them.
  - Identified and solved a major flaw in a large public data source, then leveraged that solution for better data.
  - Optimized multiple processing and analysis functions using parallel processing.

2018  
|  
2017

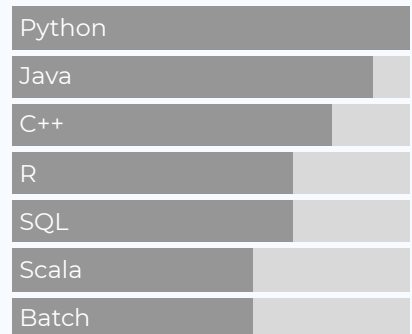
- **Undergraduate Mathematics Researcher**  
Department of Mathematics University of Dayton
  - Researched a generalized approach to compute the volume of revolution.
  - As a freshman, worked directly with my professor to extend and generalize a concept taught in class.
  - Presented the research at a yearly undergraduate research conference, covering the pros & cons of my approach.

View this CV online with links at  
<https://bpblakely.github.io/cv/docs/cv>

## CONTACT

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 419-779-3764  
 [github.com/bpblakely](https://github.com/bpblakely)  
 [linkedin.com/in/brian-blakely](https://www.linkedin.com/in/brian-blakely)

## LANGUAGE SKILLS



Made with the R package  
[pagedown](https://github.com/josiahmiller/pagedown).

The source code is available on  
[github.com/bpblakely/cv](https://github.com/bpblakely/cv).

Last updated on 2020-09-24.



## INDUSTRY EXPERIENCE

2021  
|  
2020



### Open Source Developer

[SafeGraph](#)

- Developer of SafeGraphs multithreaded Python library.<sup>4</sup>
- Created functions used by thousands of researchers that utilizes parallel processing to significantly decrease computation time.
- Decreased computation time by over 200%, which enabled easier large scale processing of SafeGraph data.
- Co-hosted a presentation which introduced this Python library and displayed the power of the multithreaded functions.

I often contribute to open source projects and am passionate about making & releasing my own software to help others.

2020  
|  
2019



### Independent Developer

- Developed and maintained software for a video game on my free time and distributed it to 30-40 users weekly.
- Solved problems for user compatibility and performance issues.
- Underwent the stages of development under a strict time frame.
- Released polished software publicly which has been used several thousands of people.



## COLLEGIATE ACTIVITIES

2020  
|  
2020



### Hackathon: Second Place

Department of Computer Science

📍 Bowling Green State University

- Analyzed the lyrics of the top 100 songs in the last 60 years using natural language processing and topological data analysis.<sup>5</sup>
- Generated a data set by web scraping multiple sources to get the top 100 songs for every year and get their corresponding lyrics.
- Created word clouds and frequency graphs to show the trends in lyrics over time.

I am passionate about new learning experiences and actively seek ways to grow my education.

2018  
|  
2017



### Video Game Club, Vice President

University of Dayton

📍 University of Dayton

- Collaborated with a team of three to arrange and coordinate events attended by over 40 people on a bi-weekly basis.
- Largest growing club during the 2017-2018 academic year.



## SELECTED PUBLICATIONS, POSTERS, AND TALKS

2021  
|  
2020



### A Solution to Biased Twitter Sampling

Applied Statistics Department

📍 Bowling Green State University

- An introduction and analysis of how to correctly sample tweets from Twitters free Search API.
- This paper is still in the works, but should be published in early 2021.



## RELEVANT COURSEWORK



### Computer Science

- Machine Learning
- Software Engineering
- Analysis of Algorithms
- Object Oriented Programming



### Mathematics

- Statistics
- Statistical Learning
- Real Analysis
- Numerical Analysis



## LINKS

- 1: [https://colab.research.google.com/drive/IV7hnyYuY\\_dUXQEPkCMZkgMuBFQV4iA\\_4#scrollTo=ZaejMX3pEwVT](https://colab.research.google.com/drive/IV7hnyYuY_dUXQEPkCMZkgMuBFQV4iA_4#scrollTo=ZaejMX3pEwVT)
- 2: <https://github.com/bpblakely/Python-Pupil-Tracking>
- 3: <https://github.com/bpblakely/Analysis-of-Historically-Popular-Songs/tree/master/Data>
- 4: [https://github.com/SafeGraphInc/safegraph\\_py](https://github.com/SafeGraphInc/safegraph_py)
- 5: <https://github.com/bpblakely/Song-Analysis-Revisited>