

Benjamin Lu

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Education

University of North Carolina at Chapel Hill

B.S. Statistics and Computer Science 2020
GPA · 3.6/4.0

Skills

Programming: Java, C, Python, GO

Analytics: SAS, JMP, IPython, R, Excel, SQL

Web Tools: HTML/CSS/JS, Flask, Bootstrap, jQuery

Employment

UNC Department of Computer Science · [COMP 410 Undergraduate TA](#)

[Chapel Hill, NC](#)
Aug. 2018 - Present

- Working as a teaching assistant for Comp 410: Data Structures and Analysis.
- Facilitating office hours for a class of 375 students providing guidance in Java programming.
- Grading assignments in data structures such as Linked List, BST, BHEAP, and Dijkstra's Algorithm.

SAS Institute · [Data Engineering Intern](#)

[Research Triangle, NC](#)
Summer 2018

- Presented multiple analyses on SAS Viya defects to recommend product features to VP of R&D.
- Worked with HTML design team to improve SAS Viya usability by analyzing customer survey data.
- Created data pipelines to aggregate over 1 million defects using SAS code and SAS/Share servers.
- Built dashboards using JMP to allow testing divisions to analyze 9 years of their product defects.

WildKiz.com · [Front-End Developer Intern](#)

[Philadelphia, PA](#)
Summer 2017

- Translated UX wireframes into responsive, interactive features, using HTML/CSS/JavaScript.
- Designed and created customer landing pages to increase click-through rates by ~25%.

UNC Energy Management · [Database Manager & Analyst](#)

[Chapel Hill, NC](#)
Nov. 2016 - May 2018

- Managed database of utilities for 200+ properties throughout the entire UNC campus.
- Used Java, Apache POI, and Excel to improve storage time of utility data from days to seconds.
- Modeled energy usage in IPython to recommend renovations leading to ~\$3,000 in yearly savings.

Projects

Sentiment Analysis Tool

- Created a web application to conduct sentiment analysis on a provided text using Python's Natural Language Toolkit and Textblob.
- Constructed a RESTful API with Flask allowing English text to be submitted and analyzed for sentiment by a Naive Bayes Classifier.
- Utilized HTML/CSS/JavaScript and Bootstrap to create an intuitive and informative user interface.

UNCW IDEA Lab

- Cleaned and analyzed Trauma Symptom Inventory test data from 1,010 military veterans from Camp Lejeune in Excel.
- Tested correlation between the number of blasts endured in combat and PTSD using the Trauma Symptom Inventory using R.
- Developed a reduced version of the Trauma Symptom Inventory without a significant loss of information using the Item Response Theory.

Activities

Carolina Analytics & Data Science (CADS) · [Technical Chair & Project Leader](#)

Sept. 2017 - Present

- 2017: Created Metric Matters project; led bi-weekly workshops teaching Python using UNC utility data.
- 2018: Director of all projects conducted by CADS; organizer of CADS yearly data case competition.
- Organizing committee of annual UNC data hackathon (CarolinaDataChallenge.com).

Girls Who Code · [Instructor](#)

Jan. 2018 - Present

- Working to close the gender gap in technology and change the image of programming.
- Teaching 30 grade school students Python and Web Development weekly to empower them in STEM.

Hack NC · [Marketing & Dev Team](#)

May 2017 - Oct. 2017

- Planned logistics and marketing strategy for the largest hackathon (600+ participants) in NC.
- Managed social media outlets and contributed to HackNC.com to increase attendance by 15%.

Coursework & Awards

Computer Science · OOP (401) , Data Structures (410) , Computer Organization (411), Models of Languages (455), Databases (521)

Statistics · Design of Experiments & ANOVA (UNCW), Introduction to Probability (435) , Statistical Methods (455), Optimization (415)

Math · Combinatorics (UNCW), Multivariable Calculus (233) , Discrete (381), Differential Equations (383), Linear Algebra (547)

Awards · Dean's List every semester, Army National Scholar Athlete Award, Eagle Scout