

## Aniket Singh

244 Madison Ave, APT #4, Youngstown, OH 44504 | aniketkashyyap@gmail.com | (330) 891-7764 | Personal Website | GitHub

## EDUCATION

### Youngstown State University (YSU), Youngstown, Ohio

College of Science, Technology, Engineering & Mathematics (STEM)

Master of Science in Mathematics

Anticipated, May 2023

*Specialization in Statistics*

### Youngstown State University (YSU), Youngstown, Ohio

College of Science, Technology, Engineering & Mathematics (STEM)

Bachelor of Science in Computer Science

May 2021

Minor: Mathematics, ICP Data Analytics

Overall GPA: 3.65/4.0

*Magna Cum Laude, YSU Honors College*

## SKILLS

**Programming & Data Analytics Skills:** Python, Java, C++, MATLAB, LaTeX, R, SAS, SQL, Excel, Tableau

**Machine Learning & Predictive Modelling:** Feature Importance Analysis, Linear/Logistic Regression, KNN, K-means Clustering, Support Vector Machine, Regression Tree, Random Forest, Graph theory, Regression splines, Keras, TensorFlow

**Other Concepts:** Angular, Django, HTML, CSS, JavaScript, TypeScript, Bootstrap, Git (Version Control)

**Testing:** Unit Test, Component Test

## FINANCIAL PREDICTION & DATA ANALYTICS PROJECTS

### Loan Status Prediction, SAS Data Analysis, YSU

Fall 2020

- Built and trained a system that checks whether a customer qualifies for a loan with test accuracy of 87% using logistic regression model
- Cleaned an unstructured training data with 20,000 records and 141 variables using Pandas on Python and SAS studio.
- Implemented cluster imputation, Greenacre's method, variable clustering, and variable screening to finalize the training data and reduced the indicators of customer's trustworthiness from 141 to 9 predictors using multiple statistical techniques.

### Airbnb Data Analysis, Data Visualization, YSU

Spring 2021

- Performed in-depth analysis using data visualization techniques on numerical, categorical and geolocation data.
- Data Visualization used such as box plots, mosaic plots, maps, fourfold plots, and histogram.
- Categorical data such as room type, and cleaning fee were significantly more important along with geolocation data.

### Airbnb Price Prediction, Mathematics Capstone, YSU

Spring 2021

- Processed data with 50,000 rows, visualized data to perform better analytics and conclusively find better predicting factors.
- Utilized predictive modelling techniques such as Linear Regression, Ridge/Lasso Regression, and Random Forest to develop predictive model with least RMSE and resolved problem of overfitting on test data.
- Hyperparameter tuning to increase predictive accuracy.

## RELEVANT COURSEWORK

- Predictive Modeling, Data Visualization, SAS Data Analysis, Bayesian Statistics, Probability and Statistics, Development of Databases, Data Structures and Algorithm, Data Structures and Objects, Advanced Object-Oriented Programming, Operating System, Computer Architecture, Artificial Intelligence in Game Design, Theory of Finite Automata
- Registered Coursework: Advanced Data Analysis, Abstract Algebra, Applied Time Series Analysis, Mathematical Statistics I

## WORK EXPERIENCES

### Resident Assistant (RA), Residence Life, Youngstown State University

Fall 2018 - Spring 2021

- Organized 8+ educational and social events for 30+ residents.
- Fostered development of the relationship between 30+ residents.
- Communicate, collaborate, and correspond with on and off-campus offices such as counseling, student activities, campus security, planned parenthood, etc.
- Received wide-spread praise from residents and supervisor; only RA to be recognized by Division of Student Experience as an outstanding student supervisor.

- Communicating complicated technical solutions to the issues of 15+ instructors and 10+ students on daily basis.
- Imaging university electronic devices, and inventory of devices.

## ADDITIONAL PROJECTS

### **Music of Networks**, COMAP, Team Math Modelling Competition, ICPC

COMAP 2021

- Organized dataset of 147,000 observations effectively using advanced querying, visualization, and programming skills.
- Implemented the K-means Clustering Algorithm to classify the artists on the basis of their similarities in musical characteristics (8 Clusters out of 19 different music styles; observed optimal cluster using statistical techniques)
- Used three different directed network graphs to analyze and quantify the influence process in music evolution.
- Model productively manifested multiple trends, changes within music style and their popularity between 1921-2020 using timeseries analysis and data visualization.
- Meritorious Winner (Top 7% Internationally and Top 3 in the US in Problem D)

### **Weather Pattern Recognition & Energy Consumption Optimization**, Computer Science Capstone, YSU

Fall 2020

- Cleaned and normalized weather data using Pandas package in Python.
- Performed unsupervised learning techniques (K-Means and DBSCAN) to group the data into different weather events.
- Detected weather anomalies by training regression models using sliding window and forward chaining on the time series data.
- Used Numpy to analyze the hourly energy consumption in different weathers and provided data/strategies to reduce the consumption by 20% and trained Linear Regression Model to predict energy consumption based on weather.

### **Breast Cancer Prediction**, Predictive Modeling, YSU

Spring 2021

- Performed in-depth analysis on data to understand differences between benign and malignant tumors.
- Trained a model using Support Vector Machine (K-classification) and tuned the model to increase the predictive accuracy.
- Final model obtained with 98.2% accuracy, 99% recall and 98% precision.

### **Ext 2, VDI Scanner**, Operating System, YSU

Spring 2020

- Developed a system software that copies a Virtual Disk Image (VDI) file, in an ext2 filesystem, to a host system.
- Accessed the root directory of the passed VDI filesystem to list all files in the filesystem in UNIX's "ls" format.
- Successfully completed READ/WRITE operation without corrupting the disk image.
- WRITE operation performed on both fixed and dynamically allocated VDI file.

## HONORS AND AWARDS

- **COMAP 2021, Meritorious Winner** (Top 3 in US [Problem D] and top 7% internationally)
- **Hirsch-Satrum Scholarship**: Award Presented to an outstanding campus leader.
- **Bernadine Marinelli Memorial Scholarship**: Award presented to an outstanding student supervisor in the division of student experience.
- **Multicultural Leadership Scholarship**: Award recognizes a minority student who has achieved academic success and demonstrated effective leadership in promoting cultural awareness to the campus and community.
- **Dean's List** (Spring 2018-Spring 2021)

## LEADERSHIP ACCOMPLISHMENTS

- International Student Organization, Senior Student Advisor Summer 2021 – Present
- International Student Organization, President Fall 2019 – Spring 2021
- YSU Honors College, Member Spring 2018 – Spring 2021
- National Society of Collegiate Scholars, Member Spring 2018 – Spring 2021
- YSU iPals, Vice President of Membership Recruitment Spring 2018 – Spring 2019
- Summer in America, Activity Leader Summer 2018, Summer 2019
- Honors College, Honors Trustee Fall 2018 – Spring 2019
- International Connector, Young Innovator Spring 2019
- Enactus, Member Fall 2018 – Spring 2019