

Yeonji Baek

baekb100b@gmail.com | 714-356-8700 | linkedin.com/in/yeonji-baek/

EDUCATION

Carnegie Mellon University

Pittsburgh, Pennsylvania

BS in Statistics & Machine Learning; Minor in Business Analytics & Optimization, Human-Computer Interaction

May 2026

Cumulative GPA: 3.52; High Honors Dean's List Fall 2022

Relevant Coursework: Fundamentals of Programming & Computer Science, Principles of Imperative Computation, Probability & Statistical Inference, Statistical Graphics & Visualization, Introduction to Machine Learning, Data Management Fundamentals

EXPERIENCE

Research Assistant

Pittsburgh, Pennsylvania

Concepts, Actions, and Object Lab (CAOs)

August 2023 – May 2024

- Developed a program in Python utilizing OS, NumPy, and OpenCV to extract thousands of frames from videos for a dataset
- Implemented machine learning experiments using Fastai2 library and neural network models in Google Colab using the extracted frames and the altered version of the frames to analyze the accuracy of the models
- Designed experiments using PsychoPy to test intuitive physics in participants using the same frames tested with the models
- Facilitated one hour long experiments on various participants to collect data and compared the results between humans and models

Data Analyst & Tutor

Fullerton, California

Algebra Tutoring Center at Sunny Hills High School

August 2021 - May 2022

- Evaluated 100+ students for tailored tutoring sessions in Algebra 1 to AP Calc BC, fostering individualized learning support
- Collaborated with math teachers to incentivize students for participation in order to promote club and academic success
- Managed tutoring session data in order to optimize support for specific subjects by employing more tutors during certain times

Tutoring Director

Fullerton, California

YouthfulCode Club | <https://youthfulcode.weebly.com/>

September 2020 - December 2021

- Developed Python, Scratch, and JavaScript lesson plans for 100+ elementary students for seasonal camps
- Outreached for sponsorships to school education department for prize of \$50+ to host events like Hackathons for 40+ students
- Empowered kids nationwide from California to New York by igniting their passion for CS and AI, regardless of age or gender

PROJECTS

“Traffic Stops in Hartford, Connecticut” Project

November 2023 – December 2023

Statistical Graphics & Visualization Group Project | <https://tinyurl.com/39tsmvfc> | R

- Conducted in-depth analysis on a dataset of 18k+ traffic stops from Hartford Police Department using R (tidyverse, ggplot, sf)
- Collaborated with a team, updating progress and responsibilities, with a personal focus on geographic distribution of traffic stops
- Generated interactive graphs, identifying a potential trend that residents in the Downtown district had a higher frequency of arrests

“Comparing Different Classifiers for Titanic Survival Prediction” Project

March 2023 – April 2023

Methods of Statistics & Data Science Individual Project | R

- Utilized classification models (LDA, QDA, classification tree, binary logistic regression) with separate training and testing dataset
- Evaluated univariate/bivariate Exploratory Data Analysis using R and calculated error rates to identify the most suitable model
- Analyzed classifiers to determine their effectiveness in predicting outcomes for passengers who survived and those who did not

Bee Project

November 2022 – December 2022

Fundamentals of Programming and Computer Science Individual Project | <https://tinyurl.com/2s3n5kd6> | Python

- Designed a Python game challenging users to bloom as many flowers as possible within a 30-second timeframe
- Implemented a leaderboard feature, storing scores in a data file to create a competitive and exciting gaming environment
- Utilized object-oriented programming to create automatic bees by providing in-game assistance for users acclimating to the game

CAMPUS INVOLVEMENT

Orientation Leader

Pittsburgh, Pennsylvania

Carnegie Mellon University First-Year Orientation

February 2024 – Present

- Guided 1000+ first-years through their transition into university life with activities such as navigating public transportation
- Facilitated daily meetings for 30 first-years to establish dorm etiquette expectations, fostering a respectful community atmosphere
- Hosted information sessions for students in academic success and importance of utilization of campus resources as a role model

Financial Chair

Pittsburgh, Pennsylvania

Asian Student Association

October 2023 – Present

- Generated fundraiser ideas for upcoming CMU Giving Day such as ASA family challenges in order to maximize the donations
- Coordinated successful fundraiser by fostering collaborations with ASA assassin participants, resulting in increased sales
- Managed sales efforts for the club's fundraisers by actively marketing on social media, producing \$6000+ within a day

SKILLS

Programming Languages: Python (NumPy, Pandas, Scikit-Learn), R, SQL, HTML, CSS, JavaScript, Java, C++, LaTeX

Applications: Tableau, MongoDB, Microsoft Excel, Adobe Creative Suite (Photoshop, InDesign, Lightroom), PsychoPy

Languages: English (Advanced), Korean (Advanced)

ACTIVITIES/INTEREST

Organizations: Quantitative Social Science Scholar, Data Science Club, Students Using Data for Social-Good, Kappa Kappa Gamma