Rachel Ombok

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EDUCATION

New York University, Tandon School of Engineering **Brooklyn, NY**

Bachelor of Science, Computer Science, Minor in Game Engineering May 2022

- **Honors:** Recipient of Nick Russo Award for Outstanding General Engineering Design, Girls Who Code & Walmart's Grace Hopper Celebration Scholarship Recipient 2020
- **Relevant Coursework:** Object Oriented Programming **(C++)**, Data Structures and Algorithms **(Python)**, Discrete Mathematics, Data Analysis, Computer Architecture and Organization, Design and Analysis of Algorithms, Introduction to Databases, Operating Systems, Linear Algebra and Differential Equations, Software Engineering **(C)**

EXPERIENCE

Research Experience for Undergraduates – COV-IDEAS Summer 2020 **Atlanta, GA**

Research Intern June 2020 – Present

- Conducted research for building a prediction market relevant to the coronavirus pandemic by aggregating public health forecast data
- Built an interactive forecasting website with **React** and **Flask** that allows users to predict future metrics related to COVID-19, and stores these predictions in **MongoDB**
- Designed dynamic website for REU organization and oversaw program website updates and modifications

NYU Game Innovation Lab **Brooklyn, NY**

Research Intern February 2020 – August 2020

- Create general game playing agents for The Sims 4 using a quality diversity evolutionary algorithm
- Code **C++** program that simulates sims and in-game objects and tests how they affect a sims' mood and environment
- Authored and published AIIDE 2020 conference research paper from analyzed and interpreted novelty search experiment results

PROJECTS

HandyMap **(Java & Python)** October 2019

- Coded backend of Android application that identifies wheelchair accessible entrances on the MIT & Boston University campuses
- Programmed scenes in **Java** that iterated through latitude and longitude coordinates, and mapped them using the **Google Maps API**
- Winner of Best Assistive Tech Project & placed Top 10 against 200+ teams at HackMIT 2019

The Pink Effect **(Python, AWS Rekognition, Jupyter)** May 2020 – Present

- Programmed scripts and created visualizations that analyzed why/how K-Pop group BLACKPINK has amassed global popularity
- Scraped and cleaned BLACKPINK and various artists' music and lyrical data using **Spotipy**, **Genius API** and **Chartmetric API**
- Trained an image-based machine learning model to interpret and label visual elements in music videos using **Amazon Rekognition**
- Showcase data visualizations using **Jupyter Notebook** and **D3** and analyzed results with **pandas** dataframe

SKILLS

Technical: Python, C++, HTML, CSS, Javascript, C#, React, Flask, MongoDB
Software: Unity, Microsoft Office, G Suite, Figma, Jupyter Notebook

LEADERSHIP ACTIVITIES

NYU Girls Who Code College Loop **Brooklyn, NY**

Founder / President October 2019 – Present

- Founder and organizer of bimonthly meetings for the Girls Who Code (GWC) College Loop at New York University
- Recruit members, plan meetings, manage logistics, and serve as the point of contact with Girls Who Code organization
- Manage monthly challenges that hone computer science skills, and provide professional development opportunities with industry professionals and Girls Who Code corporate partners

NYU General Engineering (EG) 1003 RDS **Brooklyn, NY**

Project Coordinator September 2018 – December 2018

- Tracked team progress and deadlines through **Microsoft Project** and monthly milestone presentations

- Planned outline to submit project early and develop extra robot assets, resulting in 15% extra credit
- Winner of Nick Russo Award for Outstanding General Engineering Design against 85+ teams for the Fall 2018 term