

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
- **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

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 – June 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#, Swift, React, Flask, MongoDB

Software: Autodesk Fusion 360, Unity, Microsoft Office, G Suite, Figma, Adobe Photoshop, 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
- Design promotional posters and create bi-weekly email newsletters for club events reaching over 40 members
- 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