

Ken Ko

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Professional Summary

A former civil engineer with 7+ years experience working on the design and construction of residential buildings, subways systems, and marine structures, and looking to transition from concrete buildings to building websites and web apps as a full-stack software engineer.

Technical Skills

Front-End: React, HTML, CSS

Programming Languages: C++, Python, Java

Database: SQL

Code Analysis/Management: Git

Mobile: Android Studio, Kotlin

Cloud Services: Salesforce Commerce Cloud

Relevant Experience

Software Engineering Intern

VSP | *New York, NY*

June 2022 – Present

- Wrote user stories and requirements in Jira for VSP's new Dragon Alliance ecommerce site
- Reviewed designs by the UX team to determine feasibility of implementation using Salesforce Commerce Cloud SFRA
- Pair programmed with senior developers in writing Swagger files
- Shadowed senior developers to learn how to implement and deploy code implementing order processing on the VSP ecommerce site

Undergraduate Teaching Assistant

Hunter College | *New York, NY*

February 2022 – May 2022

CS135 (Software Analysis and Design I) TA

- Assisted weekly C++ lab section by clarifying programming concepts, data structures, and syntax
- Demonstrated/modeled testing principles when supporting students with debugging

Prior Professional Experience

Marine Structural Engineer

Jacobs Engineering | *New York, NY*

May 2019 – August 2021

East Side Coastal Resiliency

- Collaborated with a team of 10 people to design a \$1.5 billion, 1.5 mile long flood protection barrier running from Montgomery Street to East 25th Street in lower Manhattan to protect against flooding caused by future superstorms and rising sea levels
- Developed computer-generated 3D structural models of the flood protection barrier to analyze the forces and stresses on the barrier
- Directed a multi-office CAD team located across NYC and Poland to produce thousands of drawings over the course of the project
- Coordinated with architectural and engineering firms to resolve design issues and avoid conflicts with their structures and scopes of work
- Supervised two new hires, explaining technical concepts and best engineering practices

Structural Engineer

MTA New York City Transit | *New York, NY*

May 2015 – May 2019

- Led design of several construction projects to add escalators, elevators, and stairs to subway stations in order to meet ADA standards
- Coordinated with mechanical engineering and architectural disciplines to ensure smooth delivery of project deliverables
- Mentored and trained new hire on design of steel and concrete members in underground structures
- Reviewed RFIs, structural drawings, and design calculations from consultants
- Led meetings with both in-house and consultant groups to resolve technical issues with current projects

Structural Engineer

Aaes Engineering | *Paramus, NJ*

December 2013 – May 2015

- Conducted inspections on damaged structures and suggested recommendations based on the severity and extent of damage
- Corresponded daily with clients to implement their design requirements as well as address any ongoing structural concerns.

Personal Project Experience

All Bite and No Bark – Predicting the Probability of Getting Bitten by a Random Dog

April 2022

- Cleaned and processed two datasets from NYC Open Data (Dog Licensing and Dog Bite Data); datasets contained a combined total of over 530k rows of data and were processed down to 13 rows of data using Python
- Created choropleth maps, bar graphs, and logistic regression plots from the processed data using Python's Folium, Matplotlib.pyplot, and Seaborn libraries
- Used Python's Scikit-learn library to train a logistic regression model to predict the probability of getting bitten by a passing dog based on the dog's breed and gender; model showed an accuracy rate of 98% when tested with the testing data

Flixster

CodePath | *New York, NY*

February 2022

- Utilized Android Studio and Kotlin to build a mobile app to display a list of the currently playing movies along with movie details

StudyBubble

CUNY Hunter Codefest | *New York, NY*

December 2021

- Led group of 4 people over the course of a month to build a web app that searches up public libraries within range of a given location
- Utilized React to create a single-page front-end web application, making use of the Google Geocoding and Places APIs
- Developed layout of the web application using CSS modules in React
- Presented project to a panel of judges comprised of Google software engineers

Astro-Nut

Knight Hacks Hackathon | *New York, NY*

November 2021

- Built Discord bot over the course of a weekend using Python and various NASA APIs to respond to several different commands and keywords with space-related facts and pictures

Jumper

September 2021

- Created a platform game using pygame and self-created graphics; players jump between randomly generated platforms to stay afloat

Education

CUNY Tech Prep Fellow in Full Stack Web Development | *CUNY Tech Prep – New York, NY*

August 2022 (incoming)

Bachelor of Arts in Computer Science | *Hunter College – New York, NY* | *GPA: 4.0/4.0*

August 2021 – May 2023

Master of Engineering in Structural Engineering | *Cornell University – Ithaca, NY*

August 2012 – May 2013

Bachelor of Science in Civil Engineering | *The Cooper Union for the Advancement of Science and Art – New York, NY*

August 2008 – May 2012