

# Arnav Kanwal

[arnavkanwal@gmail.com](mailto:arnavkanwal@gmail.com) | [linkedin.com/in/arnavkanwal](https://www.linkedin.com/in/arnavkanwal) | [github.com/arniekanwal](https://github.com/arniekanwal) | [arniekanwal.github.io](https://arniekanwal.github.io)

## EDUCATION

---

### New York University

*Bachelor of Science in Computer Science, Minor in Mathematics*  
*Current GPA: 3.8*

New York, NY

Sep. 2020 – Jan. 2024

## EXPERIENCE

---

### Software Engineering Intern

*Hubbell Incorporated*

May 2023 - August 2023

*Boonton, NJ*

- Developed on-target C/C++ regression testing library for embedded utility and teleprotection products.
- Modified open-source C++ testing framework and created an additional testing library for I/O dependencies, embedded Web GUI, and to support limited architecture and memory of the products.
- Created code-generator script in Python to automatically generate unit-tests, bash-script to execute tests, and successfully discovered I/O errors with a specific card configuration using my test-framework.
- Technologies: C/C++, Linux, Python, Make, Bash, SQL, Git

### Undergraduate Developer

*NYU High Speed Research Network*

September 2022 – Present

*New York, NY*

- Contributing developer to low-latency networking application called Corelink and manage entire web-development team for NYU HSRN.
- Built multi-threaded unit-tests for Corelink C++ client and contribute to applications with audio transfer.
- Manage deployment of websites on our Kubernetes cluster and lead sprints, code reviews, and approve development changes on our dashboards.
- Technologies: Kubernetes, Typescript, Node.js, Next.js, C++, CMake

### Advanced Math Tutor

*Kumon Math & Reading Center at Denver-Lowry*

May 2020 – December 2021

*Denver, CO*

- Hosted an advanced math special topics meeting bi-weekly for subjects such as Calculus and Statistics.
- Performed data entry of homework results to customize lessons and assess improvements.

## PROJECTS

---

### Soundscape | *AWS EC2, SageMaker, DynamoDB, Cognito, Python Flask, OpenAI API, Spotify API*

- Created cloud-based Flask website that performs sentiment analysis to return song recommendations from images.
- Hosted pre-trained image-captioning machine learning model with SageMaker and returned song recommendations using OpenAI API.
- Deployed application on EC2 instance with load balancer for dynamic scaling based on user traffic.

### Smart Photo Album | *AWS S3, ElasticSearch, Rekognition, Transcribe, Lex, CloudFormation, CodePipeline*

- Developed web application on microservice architecture that uses AWS Transcribe and Lex chatbot to process voice/text and perform "smart" photo searches.
- Captioned images with Rekognition and saved object labels to ElasticSearch for fast-lookups.
- Automated deployment and management of microservices with AWS CloudFormation and CodePipeline.

### Algorithmic Trading Bot | *Python, Alpaca API, HTML Parsing*

- Built a realtime trading bot that monitors stock-market conditions to algorithmically buy/sell ETFs.
- Integrated with Alpaca API for live paper trading and Alpha Vantage API for receiving technical indicators.
- All transactional history is saved to JSON and is fed back in to the bot to reinforce positive trades.

### Fullstack Blog | *Javascript, React, Node.js, Google Firebase*

- Developed a full-stack web application using React to host and serve blog content as markdown files.
- Managed backend and authentication with Google Firebase and a Firestore instance for querying images and blogs.

## TECHNICAL SKILLS

---

**Languages:** Python, C/C++, Javascript, Java, Go, SQL, HTML/CSS

**Technologies:** Git, AWS Suite, Docker, Kubernetes, React, Node.js, Next.js

**Awards:** 2022 NYU Technology, Culture and Society Writing Award for Best Literary Criticism