

ADITYA KARKI

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• Fisk University

Bachelors of Science, Computer Science and Mathematics

Aug 2022 - Dec 2025

Nashville, Tennessee

- Courses: Operating Systems, Theory of Computation, Machine Learning, Statistics, Discrete Math

EXPERIENCE

• STEP Intern, Google AUS - 500 W 2nd St, Austin, TX

May 2024 - August 2024

- Developed, configured, and integrated two new **Java API endpoints** within a custom service to support a brand-new bulk preview feature on Planogram, the Play Store's stream publishing platform.
- Migrated a live Play Stream on mobile (serving over **1.5bn** users) to a new data service pipeline; performance metrics for page load counts and latency improved by over **0.01**.
- Used prompt engineering with the **Gemini Rest API** to design and implement a class prototype for refactoring the API data fetch testing logic in an actual demo.
- Worked on three individual projects where **two** went straight to prod; contributed **6000+ LOC**.

• STEP Intern, Google NYC - 111 8th Ave, Manhattan, NY

May 2023 - August 2023

- Worked on the Google Cloud Alerting team to add **two new filters**; improved the effectiveness of an on-service web product as the number of user inputs increased by **5%**.
- Authored a sophisticated design doc for a reusable **Component-class** solution; contributed **1000+ LOC** in **Angular TypeScript** to build and integrate the add-on feature.
- Tested the UI using Scuba diff models; wrote **15+** unit tests in **Jasmine** covering all possible edge cases.

PROJECTS

• Surf Shelter

Aug 2024 - Present

A Chrome Web Extension powered by ML to make website content moderation autonomous

 [Intuition & Code](#)

- Built a modular system to use and evolve **CommonCrawl** data to detect malicious websites; integrated a **cohesive system** where the frontend client, data services, databases, and ML processors work together.
- Researched and implemented three ML models (analyzed **SVM**, **Random Forest**, and **NN** algorithms to choose the best algorithm) for specific malicious behaviors; combined them using **Hard Voting**.
- Deployed **two Flask applications**, including one with two microservices, on **Google Cloud Run** to manage feature extraction, API requests, and model predictions.
- Built a Chrome Web Extension using **React**, **TypeScript**, **Chrome Web API**, and **MongoDB** for URL extraction, calling prediction APIs, and storing necessary data, enabling **real-time** threat detection.

• Your Next Tech

Jan 2024 - April 2024

A class project to build a modern SM platform for tech enthusiasts, offering secure GitHub integration

 [Intuition & Code](#)

- Engineered a full-stack app using **NestJS** (Next UI, authJs, GitHub OAuth); deployed PostgreSQL with **Prisma ORM** and MongoDB with **Mongoose**, for relational and non-relational data respectively.
- Wrote **6+** Next.ts actions; designed **7 tables in 3NF** for the relational PostgreSQL, alongside **2 Mongoose NoSQL** schemas.
- Tested the application using cloud services: **Vercel** for hosting, **Railway** for PostgreSQL, and **MongoDB Atlas** for MongoDB.

• Portfolio Website

Jan 2022 - Mar 2023

A mobile-responsive website that introduces my portfolio works and touches upon my personal life

 [Intuition & Code](#)

- Built a **Figma** prototype and hardcoded the project using ReactJS and Tailwind with **6+ components**.
- Created a **chatbot** that answered questions about me as a person; visualized possible q&a patterns, and wrote a custom **dataset/json** to train a NN model using **Pytorch**; deployed the model using **Heroku**.

ADDITIONAL INFORMATION

Achievements: Zillow HBCU Hackathon 2023 (top 6), International Youth Math Challenge 2021 (National Gold)

Programming Languages: Python, Java, TypeScript, JavaScript, C, C++

ML Tools: Numpy, Pandas, Scikit-learn, Matplotlib, Tensor Flow, PyTorch, Google Colab, Jupyter Notebook

Web Tools: NextJS, ReactJS, Redux, Angular, Node, Express, Tailwind, Bootstrap, SASS, HTML, Figma

Other: MongoDB, PostgreSQL, Flask, Google Cloud Run, Heroku, Vercel, Vite, Git/GitHub

Interests: Meditation, Video Editing, Distance running, Cricket, Guitar