Kartavya Sharma

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EDUCATION

- **University of California, Berkeley** — Berkeley, CA
  Bachelor of Science in Electrical Engineering and Computer Science — *Aug. 2021 – May. 2025*
  - **Relevant Coursework**: Structure and Interpretation of Computer Programs; Designing Information Devices and Systems I/II; Data Structures.

EXPERIENCE

- **CalTools - Health Calculators (caltools.net)** — Indore, India
  Backend Web Developer — *Jun. 2021 - Present*
  - Implemented serverless AWS lambda functions on API Gateway to expose calculator compute logic hosted on an Express backend as a microservice to a static frontend deployed on AWS S3.
  - Used TypeScript to add origin authentication to secure API (integrated on top of CORS). Used the Serverless framework to configure API gateway endpoints and lambda function creation.

- **Salkatech (salkatech.com)** — Noida, India
  Web Developer — *Jan. 2021 - Mar. 2021*
  - Used HTML and CSS to create static page content for Salkatech's public facing website. Responsibilities included creating a product inquiry system for simulating an e-commerce experience, setting up project pages, and embedding static Google Maps location functionality.
  - Used JQuery to integrate responsive HTML components along with implementing dynamic website functionality.

- **Prime Academy High School** — Indore, India
  Computer Science Instructor — *Oct. 2018 - Nov. 2019*
  - Designed the school's curriculum to be more inclusive of a broad range of concepts in computing, and programming. Taught languages such as Python, C++, and SQLite3.
  - Introduced students to competitive programming in C++ on online platforms such as HackerRank and CodeChef.
  - Created engaging content and taught students a range of core CS concepts, including functional and object oriented programming, structured types, and debugging.

PROJECTS

- **Personal Website** — *github.com/KartavyaSharma/personal-website*
  React, Gatsby, Tailwind, Python, Flask — *kartavyas.com*
  - Set up a blog and personal portfolio website using Gatsby's static site generator.
  - Developed a custom CMS script in Python to serve markdown blog posts, and added a RegEx based form validator.
  - Implemented a social sign-in email verification system using Firebase Auth.
  - Created a Python server exposing API endpoints to process form requests and send confirmation emails to senders.

- **ROZE - Voice Assistant** — *github.com/KartavyaSharma/ROZE-Voice-Assistant*
  Java, XML, Google Cloud — *APK available on request*
  - Used Java, XML and Google Cloud APIs to program a notification narrator that can help in preventing distracted driving. ROZE uses Google Translate, TTS (text-to-speech), and Location APIs. Translate APIs allow localization, the TTS API allows text to audio conversion, and location APIs alert the user if they are going too fast based on a predefined speed.

PROGRAMMING SKILLS

- **Languages**: *Proficient:* Python, JavaScript, C++, Java; *Familiar:* RegEx, TypeScript, BASH, SQL, LaTeX
- **Frontend**: *Proficient:* React, Gatsby, Tailwind CSS, Bootstrap; *Familiar:* Tkinter
- **Backend**: *Proficient:* Node, Express, Flask, REST; *Familiar:* Serverless (AWS), Django
- **Devops**: *Proficient:* Git, Postman, WSL; *Familiar:* Docker, Heroku, AWS (Lambda, API Gateway)