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. 2024*
  - **Relevant Coursework**: Structure and Interpretation of Computer Programs; Designing Information Devices and Systems I/II; Data Structures; Machine Structures; Multivariable Calculus;

EXPERIENCE

- **UC Berkeley EECS Dept.** — Berkeley, CA
  Academic Intern — *Jun. 2022 - Aug. 2022*
  - Interning with the Data Structures course staff. Assisted students with weekly labs and helped students work on numerous projects including Gitlet – a minified version control system – and 2048 – the popular tile puzzle game.
  - Conducted exam prep sessions and mini-lectures during lab with 25 - 30 students. Led numerous problem solving sessions based on previous exam content.

- **Salkatech (salkatech.com)** — Noida, India
  Contract Web Developer — *Jan. 2021 - Mar. 2021*
  - Used JQuery, JavaScript and related Node web development libraries to build 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.
  - Ecommerce portal increased potential customer engagement by 80%.

PROJECTS

- **Gitlet - Version Control System** — *inst.eecs.berkeley.edu/~cs61b/sp22 (link to project spec)*
  Java, JUnit, RegEx — *Source code available on request*
  - Built a subset of the Git version control system. Implemented major features, including add, commit, branch, merge, log, and reset. Implemented a custom version of Dijkstra's algorithm, through BFS, to implement the merge feature. Implemented Git command recognition through the Java command pattern.

- **Rmembr - Academic Scheduler** — *github.com/KartavyaSharma/rmembr-server*
  Node, Express, React, TypeScript, Gatsby, MongoDB, Jest — *rmembr.kartavyas.com*
  - Implemented a custom asymmetric key exchange authentication system using JWTs.
  - Users can create new courses, chapters, and subtopics to manage. Each subtopic can be configured to the user's specification for spaced repetition.
  - Deployed microservice-like architecture where all business logic resides on the server and can be accessed through the numerous REST API endpoints.

- **Personal Blog & Portfolio** — *github.com/KartavyaSharma/personal-website*
  JavaScript, React, Gatsby, Tailwind, Python, Flask — *kartavyas.com*
  - Set up a blog and personal portfolio website using Gatsby's static site generator.
  - Developed a custom script to manage and create blog posts in Python, and added a RegEx based form validator.
  - Implemented a social sign-in email verification system using Firebase Auth.
  - Created a Python server exposing REST 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.

PROGRAMMING SKILLS

- **Languages**: *Proficient:* Python, TypeScript, C++, Java, RegEx; *Familiar:* JavaScript, BASH, SQL, Scheme, LaTeX
- **Frontend**: *Proficient:* React, Gatsby, Tailwind CSS, Bootstrap; *Familiar:* Tkinter
- **Backend**: *Proficient:* Node, Express, Flask, REST; *Familiar:* Serverless Framework (AWS), Django
- **Devops**: *Proficient:* Git, Postman, WSL, CICD, Jest; *Familiar:* Docker, Heroku, AWS (Lambda, API Gateway, S3)