Akshar Barot

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Skills

Languages: Java, Javascript, Python, C, C++, Typescript, HTML/CSS
Frontend: React.js, Next.js, Gatsby, Tailwind, Bootstrap, Photoshop, Figma
Backend: Node.js, Express.js, MongoDB, Firebase, Flask
Developer Tools: Git, Github, VS Code, Bash, Powershell, Jupyter Notebook

Experience

Project Manager & Lead Developer   Nov. 2022 – Jan. 2023
Ladue Computer Science Club   *St. Louis, MO*

- Led the development of a multi-faceted school information hub with features like club updates, schedules, event calendars, and resource access, designed to serve **over 1000** students
- Gathered and integrated data from **over 50** school clubs into a **MongoDB** database via Google Forms
- Managed collaboration between developers and the student body for efficient data collection and platform design
- Streamlined access to critical resources by centralizing information from multiple resources onto a single platform
- Paused active development to prioritize teaching programming concepts to accommodate novice programmers

Instructor   Dec. 2021 – May 2022
Ladue Computer Science Club   *St. Louis, MO*

- Developed and co-authored a **12-module** beginner-friendly Python course utilizing a series of Jupyter Notebooks
- Covered introductory concepts like variables, conditionals, loops, lists, libraries, and additional relevant topics
- Delivered instruction to **over 30** students, enabling them to apply Python and essential programming concepts
- Promoted active engagement and practical learning through a personal project culmination to the course

Projects

Jarvis ⧉ - Interactive 3D Hologram Environment | *Next.js, Python, Flask, Three.js, OpenCV, Mediapipe*

- Enabled precise real-time manipulation of virtual objects in 3D space based on hand position and gesture
- Implemented **3D tracking** by mapping distances between hand landmarks along a linear regression
- Integrated gesture recognition for efficient object scaling, rotation, and translation using intuitive hand movements
- Enabled **touch-free** interaction with voice commands using the **Web Speech API** for greater user convenience

Shopping List App - Cross-platform List Web Application | *Javascript, Firebase, HTML/CSS*

- Implemented efficient data management using **Firebase Realtime Database** for seamless updates and storage
- Deployed as a **Progressive Web App (PWA)** enabling accessibility across web, Android, and iOS platforms

ClickClack ⧉ - CPS Test | *Javascript, HTML, CSS*

- Crafted a distraction-free, minimal and intuitive interface using **Bootstrap**, for a streamlined user experience
- Implemented customizable test duration options, allowing users to tailor the challenge to their preferences

Education

University of Waterloo   Waterloo, ON
*Bachelor of Software Engineering - **3.95** cumulative GPA*   *Expected May 2028*