Prabhav Khera

✉ p2khera@uwaterloo.ca | linkedin.com/prabhav | github.com/probro27 | prabhav-khera.netlify.app

Technical Skills

Languages: Python, JavaScript, TypeScript, Java, C, HTML/CSS, C++, C#, Swift, Racket, Haskell, SQL
Developer Tools: Postman, Git, Docker, Firebase, Heroku, Netlify, Vercel, Azure
Technologies/Frameworks: ReactJS, NextJS, NodeJS, ExpressJS, Flask, Spring-Boot, NumPy, Pandas, Matplotlib, .NET 6.0, Scikit-Learn, Figma

Experience

Ceridian Dayforce — Sept 2022 – Present

Software Developer Intern — *Toronto, ON*

- Worked with the **Human Resources Team** in implementing new features to support the **next generation of HR Import** that Dayforce uses to import new/existing employees onto the system.
- Implemented functionality to provide more and better formatted data from Import log to help users understand the errors in their imports and how they can fix these errors.
- Developed and refactored code in **TypeScript, C#, and SQL** to support functionality for HR Recruiting Import 2.0, which is based on the next generation of HR Import.

Midnight Sun — March 2022 – Present

Project Manager - Strategy Sub-team — *Waterloo, ON*

- Leading the **optimization team**, to build a solar car, and to help improve vehicle performance with mathematical models.
- Designed the **power budget** of the vehicle by collaborating with Hardware and Mechanical sub-teams, thus collecting all of the necessary data for Strategy to develop the optimization model.
- Led **solar array testing** to help strategy team formulate the data we need for optimization.

Projects

Movie-Rooms: Stream movies with Friends and Family | *TypeScript, Socket.io, NextJS, OpenAI (GPT-3)*

- Created a **TypeScript based movie watch party application** in **NextJS** that allows people to join in and get recommendations and stream movies based on their likes and dislikes.
- Utilized the **NextJS API routes** to build functionality to authenticate users, join rooms, and get data for movies.
- Ensured security of users by using **JWT (JSON Web Token)** and **Bcrypt Hashing** for user authentications.
- Implemented **Socket.io** to be able to handle multiple users joining multiple rooms at the same time, by using sessions and cookie settings.

SentimentSongs | *Scikit-Learn, Flask, Pandas, Numpy, NextJS (TypeScript), Librosa, Spotipy, Spotify-API*

- Developed a web-app in **NextJS** and **MantineUI** that takes in user speech and based on their mood adds a playlist to the Spotify account of the user.
- Developed a model using Scikit-Learn's **MLPClassifier** that uses the audio features extracted by **librosa**, to run at an accuracy of **96.56%**.
- Built a Flask-backend that authenticates the user using **Spotify API** to get access to their top artists and tracks.
- Implemented a **custom algorithm** using valence, danceability, and energy in the backend to create playlists from the user's favourite tracks and artists.

Vision — A Search Engine | *Python, BeautifulSoup, MERN Stack, NextJS, TailwindCSS*

- Programmed a **web crawler** which uses a **Breadth-First Search** to crawl, following the ethical obligations of the robots.txt file to ensure no banned routes are crawled.
- Developed a **custom indexing algorithm** which analyzes word count and assigns them priority from data in **MongoDB** including the number of times a website has been crawled.
- Optimized search time from 2 sec to run within 10 ms, further **reducing it by 85%** using the indexing algorithm.
- Designed the front-end using **NextJS** and **TailwindCSS** that is connected to an **Express server** that serves as the backend.

Education

University of Waterloo — Sep. 2021 – Present

Candidate for Bachelor of Computer Science, 2A term — *Waterloo, Ontario*

- **GPA: 3.97**
- Recipient of the **Computer Science Upper Year Scholarship** worth **$15000** from the University of Waterloo.
- Won **2nd Place** among **609 participants** at **Def Hacks 3.0**, a global hackathon held in June 2021.