Rudraksh Monga

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EDUCATION

University of Toronto   Toronto, Ontario, CA
HBSc. Major: Computer Science (Foc. in AI); Minor: Maths, Stats; CGPA: 3.94   *Sep. 2021 – May 2025*
Relevant Courses: Data Structures, Software Tools and Systems Programming, Software Design, Linear Algebra

TECHNICAL SKILLS

Languages: Python, C/C++, C#, Java, JavaScript, TypeScript, SQL, Assembly, HTML/CSS, SCSS
Frameworks: Tensorflow, scikit-learn, Keras, OpenCV, React.js, Svelte.js, Node.js, Express.js, Flask, Django, GraphQL
Developer Tools: Git, AWS, Webpack

EXPERIENCE

Co-Founder, CTO, Lead Programmer   Apr. 2023 – Present
1Kit   *Toronto, Ontario, CA*
- Established a ed-tech startup focused on addressing challenged students and researchers face while accessing and managing information on the web.
- Conceptualized, developed, and deployed a dynamic and responsive MVP with **novel features** extracted from interviews with potential users.
- Designed a multifaceted business model to help **stabilize revenue** during the summer, **maximise user retention**, and drive continuous **user growth**.
- Spearheaded the design of a secure and scalable infrastructure on AWS with optimized data storage that lays the foundation for future data analytics capabilities while **minimizing AWS costs**.

Web Development Executive   Jan 2023 – Present
Hack the 6ix   *Toronto, Ontario, CA*
- Created new **reusable stylized components** that were utilized while building multiple sections of the event's landing page and hacker dashboard.
- Significantly **improved post application flow** for users applying to the hackathon.
- Fetched and rendered Notion pages in a React app to convey vital information to hackers.

Software Engineering Intern   July 2022 – Aug. 2022
EnrichAI   *Gurgaon, Haryana, IN*
- Developed an automated testing suite consisting of **unit, integration, end-to-end, and usability tests** for an IoT waste collection solution deployed in Doha, Qatar.
- Significantly boosted test automation by achieving >**97% automation of tests**, increasing testing efficiency and reduced manual effort.
- **Increased ease of test analysis** and identification of failed tests by automatically generating **color-coded HTML reports** with screenshots and timestamps, facilitating prompt issue resolution.

PROJECTS

LipNet | *Python, TensorFlow, OpenCV, Matplotlib*
- Developed a deep learning model using TensorFlow for video-based speech recognition, achieving **accurate prediction** of spoken words in videos by combining Conv3D and Bi-LSTM layers.
- Implemented a **data transformation pipeline** to preprocess video files, extract frames, convert them to grayscale, and normalize the data, ensuring optimal performance during training and testing phases.

SoundSpace | *React Native, Python, Flask, GraphQL*
- Developed an cross-platform mobile application help UofT students find quiet study spots around campus.
- Utilized **audio analysis** techniques to measure average audio amplitude, volume spikes, and reverberations in the surroundings, enabling users to discover optimal study environments.

PortAudio [Open Source] | *C/C++*
- Facilitating **communication** with external audio software by developing data conversion functions between custom audio data formats, utilizing bit shifts to ensure **compatibility** with underlying architecture of the target machine.