Raj Shah

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EDUCATION

University of Waterloo   Sept 2024 – Present
Bachelor of Computer Science

Related Coursework: Algorithm Design and Data Abstraction, Tools and Techniques for Software Development, Designing Programs, Calculus and Linear Algebra, Principles of Microeconomics and Macroeconomics

EXPERIENCE

Alumnus & Ambassador | *SHAD Canada*   Jul 2023 – Aug 2024
Waterloo, ON, Canada

- Selected for SHAD, a prestigious STEM program, collaborating with professors and peers to solve **engineering challenges** and strengthening analytical skills in competitive team environments.
- Utilized **neural networks** to develop **image and speech recognition** systems, experimenting with model architectures to improve performance metrics like precision, recall, and F1-score.
- Applied logistic regression and decision tree models for **binary classification** tasks, optimizing the accuracy of predictions in **dataset-driven challenges**.
- Mentored future SHAD participants by hosting information sessions and collaborating with SHAD officials, counsellors, and teachers, enhancing **administrative** skills.

Instructor Intern | *MakerKids*   Jul 2024 – Aug 2024
Toronto, ON, Canada

- Led the advanced-level **Python** coding classes, guiding students through programming fundamentals.
- Facilitated **project-based** learning, helping students design and develop custom **applications** using Python, including games, automation scripts, and data visualization tools.
- Emphasized the MakerKids philosophy of promoting creativity, innovation and resilience through STEAM education.

PROJECTS

Personal Portfolio | *React, Next.js, Firebase, TypeScript, JavaScript, HTML, CSS, Git, Vercel*   ⊙ Portfolio
- Developed a **full-stack** personal web application, hosted on Vercel for optimal performance and scalability.
- Leveraged **Next.js** for **server-side** rendering and dynamic routing, improving **search engine optimization** and page load times.
- Integrated **Firebase** for **real-time** database functionality, allowing for seamless updates of portfolio content **without redeployment**.

iCalendify | *JavaScript, HTML, CSS, Git, Vercel*   ⊙ iCalendify
- Engineered from scratch a minimalist **calendar** app with a focus on enhancing user productivity.
- Implemented **state management** and **lifecycle methods** in JavaScript to handle **dynamic event creation**, ensuring that event data is efficiently tracked and updated.
- Utilized two-way **data binding** to synchronize input fields and calendar display, allowing **real-time updates** to events without manual refresh.
- Stores events **locally**, providing persistent data even after closing the browser, with instant access to previous events.

SchoolSphere | *Java, Apache NetBeans, Git*   ⊙ SchoolSphere
- Designed and implemented a robust **database system** for school management, handling student, employee, and inventory data using **Object-Oriented** principles to ensure program scalability.
- Employed **file I/O** operations for efficient data storage and retrieval in **.txt** files, allowing users to manage records without the need for an external database.

SKILLS

Languages: Java, Python, C, C++, JavaScript/TypeScript, HTML/CSS, Racket, Scheme

Tools & Frameworks: React, Next.js, Node.js, Apache, Git, Firebase, PyTorch, Flutter, Angular, D3.js, Linux