Ujjval Rajput

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Education

University of Toronto   *Sept 2021 - June 2026 (with **PEY Co-op**)*

Honours Bachelor of Science, Computer Science & Technology, Coding, and Society

- **Courses:** Software Design, Systems Programming, Operating Systems, Algorithms, Data Structures, Web Dev. **GPA: 3.46, 86.5%**

Work Experience

Software Developer   *Sept 2024 - Present*

University of Toronto

- Joining the development team responsible for the Cardiovascular Disease Club website, and will be integrating advanced interactive features and optimizing **backend** infrastructure, driving user engagement and satisfaction.
- Will be collaborating with a multidisciplinary team to gather user feedback, refining the website's functionality to enhance accessibility and streamline the user experience.

Software Engineering Intern   *July 2024 - Oct 2024*

Concur

- Implemented **JavaScript** obfuscation techniques to enhance **SDK** security, leading to a **30% increase** in protection against unauthorized access and ensuring compliance with industry standards.
- Fortified blockchain security by integrating Dilithium verification in **Golang**, significantly strengthening cryptographic defenses against emerging quantum computing threats.
- Boosted user experience by developing and maintaining **React** web components, collaborating with the **UX team** to improve user satisfaction and interface functionality.

FSG Leader, Computer Programming   *Aug 2023 - Dec 2023*

RGASC

- Designed and implemented **Python** lesson plans on core concepts such as **data structures** and **algorithmic efficiency**, enhancing participants' technical proficiency.
- Conducted study sessions and resolved inquiries that improved participant performance, resulting in an average grade **increase of 15%**.
- Collaborated with other facilitators and academic staff to refine course material and support students' learning journeys.

Projects

- **PortaByte** 🔗: A file-sharing web app allowing upload, download, and secure file sharing via email. Built using the **MERN stack** with **Next.js (TypeScript)** and integrated with **AWS S3** for cloud-based file management. Implements **JWT** authentication for user security, **Redux** for efficient state management, and leverages **RESTful APIs** tested with **Postman**.

- **TakeOnAI** 🔗: Conducted a study comparing AI and automation discourse across traditional media (NYT **API**) and social platforms (GitHub **GraphQL**). Utilizes **Python** libraries like **NumPy** and **Pandas** for data manipulation, **Scikit-Learn** for feature extraction, **Matplotlib** and **Seaborn** for data visualization, and **TextBlob** with **NLTK** for sentiment analysis.

- **Pytube Fetcher** 🔗: A **Python**-based desktop application for downloading non-copyrighted YouTube content in resolutions up to 1080p, powered by the **PyTube API**. Features an interactive UI built with **Tkinter** and Pandas, it leverages threading for performance and **BeautifulSoup** for accurate title extraction. **Matplotlib** is utilized to visualize conversion history.

- **A-MazeMe** 🔗: Single player interactive game built with **MVC architecture** and **JavaFX** graphics. Leveraged **design patterns** and **UML** for customized controls and mini-games to enhance user engagement by **20%**. Applied **Agile** Methodologies, **Git**, and **Scrum** Sprints within a cross-functional team, ensuring iterative development progress.

Skills

Languages	Python, C, Java, JavaScript, TypeScript, GraphQL, SQL, HTML/CSS, R
Frameworks	React, Next.js, Node.js, Express.js, JUnit, NumPy, Pandas, MatPlotLib
Other	Git, Linux/Unix, MongoDB, PostgreSQL, SQLite3, Figma, XD