



# Amol Venkataraman

Computer Science  
University of Waterloo

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## SKILLS

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**Languages:** Python, C, C++, Ruby, Java, HTML, CSS, JavaScript, TypeScript, SQL

**Frameworks:** Django, Flask, FastAPI, Rails, OpenCV, Mediapipe, Tensorflow, Keras, Numpy, Pandas, Spark, Airflow, Scikit-Learn, Matplotlib, Bootstrap, Tailwind, React, React-Native, NextJS

**Tools:** Linux, Git, Bash, Makefile, VSCode, Postgres, Redis, Postman, Docker, Kubernetes, AWS, Google Cloud, Azure, Databricks, Jira, Confluence, L<sup>A</sup>T<sub>E</sub>X

## EXPERIENCE

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### •RBC Investor Services - Data Engineer [Co-op]

May 2023 - Aug 2023

- Worked on **fully automating** the ETL pipelines for **dozens of terabytes** of critical investor **data** using *Airflow, Pandas, PySpark, Databricks, and AWS*.
- Contributed to **major** workflow and **repository changes**, **decreasing** the **time taken** to set up a new ETL pipeline by **75%**.
- Added comprehensive **unit tests** to existing repositories, significantly **improving** the **CI/CD workflow** and **decreasing** the **time taken** for a **manual code review** by over **50%**.

### •University of Waterloo - Full-Stack Developer [Part-Time]

Oct 2022 - Dec 2022

- Created **full-fledged**, interactive, mobile-responsive **admin web pages** using *React* and *Ant Design*, and **populated** them using a *Go* server.

### •Nokia - Future Tech Intern [Full-Time]

Jul 2021 - Aug 2021

- Created a **script** with *Python, Locust, and Greenlet* to **load-test** the Nokia **Network Services Platform** by sending **millions** of **HTTP requests per second**, a **30x speed increase** over the older program.
- **Cleaned up** and **optimized** old *Javascript*-based *Selenium* tests to make them **over 5x faster**, while still using **less resources**.

### •Tilda Research - Full-Stack Developer [Part-Time]

Jan 2021, Jul 2021

- Added **filter-based search** to admin pages on a *Ruby-on-Rails* server, making **complex searches** over **3x faster**.
- Made the **UI load time** for various pages over **50% faster**, and improved the **UI and UX**.

## POSITIONS OF RESPONSIBILITY

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### •Faculty Ambassador and Orientation Leader, University of Waterloo

Nov 2022 - Present

### •Vice-President, UW Computer Science Club

Sep 2023 - Present

### •Lecturer and Mentor, UW Blueprint

Oct 2023 - Present

## PROJECTS

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### •Docket

*Python, Django, Nginx, Postgres, Redis, Celery, Bootstrap*

A **cross-platform calendar** app with **various built-in tools** to help with time management.

### •Pikpic

*Python, Flask, Tensorflow, Keras, FaceNet, YOLOv6*

A **self-hosted photo gallery** app that uses **deep neural networks** and embedded JPEG metadata to allow searching for images for **people, places, things, and text**.

### •Singularity

*Python, REST APIs*

A **lightweight, automated**, and highly **customizable**, CLI **script** that **downloads** content from online learning platforms like **Google Classroom** and **D2L Brightspace** using their **APIs**.

### •Blockmind.AI

*NextJS, Prisma, Tailwind, ChatGPT API, Web3 dApps*

A *ChatGPT*-based **chatbot** that **teaches** people about **cryptocurrency** and the **Web3 ecosystem**, with **integrated** features like a **market visualizer** and **wallet** functionality. **Winner** of over **US\$3000** in **prizes** at ETHWaterloo 2023.

## EDUCATION

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### •University of Waterloo - Honours, Computer Science, Co-op

2022 - 2027

**Courses:** Algorithms, Data Abstraction, Object Oriented Programming, Digital Logic, Calculus, Physics, GIS.