# Kaven Muraleitharan

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## EDUCATION

**Carleton University**                                                                     *Expected Graduation: April 2027*
*Honours Bachelor of Computer Science in A.I Machine Learning (Co-op),* **GPA**: *3.5/4.0*                 *Ottawa, ON*
- **Awards:** Dean's List (2023-2025), CU Academic Scholarship (**$16,000**), CU TSA (**$1,900**), CU Academic Staff (**$1,900**).
- **Relevant Course Work**: Data Structures and Algorithms, Systems programming, Software Engineering, Fundamentals of Web Applications, Robotics, Discrete Structures I & II, Intro to Computer Science I & II, Statistical Modelling I.
- **Affiliations:** Carleton Computer Science Society (CCSS), CUHacking, Paul Menton Centre.

## EXPERIENCE

**Notetaker**                                                                                 **Sept. 2024 – Present**
*Carleton University*                                                                                    *Ottawa, ON*
- Prioritized, organized, and managed personal workload while meeting 48-hour weekly notetaking deadlines for **400+** students taking COMP 2401 (Intro to Systems Programming) at Carleton University as a computer science notetaker.
- Identified and synthesized key learnings from classroom lectures into succinct notes to help improve comprehension of lecture material.
- Demonstrated ability to listen actively during lectures and convey spoken information clearly in written form for an audience with varied abilities and needs.
- Took initiative to commit to and follow-through on a leadership role at Carleton Universities Paul Menton Centre for a number of months under minimal supervision.
- Maintained confidentiality and professionalism while interacting with professional staff and note-taking recipients.

**Technology Representative**                                                                   **Jan. 2023 – Aug. 2023**
*Staples*                                                                                            *Stouffville, ON*
- Delivered personalized technology solutions to address customers' needs, resulting in an increase in customer satisfaction ratings.
- Drove over **$5,000+** in sales revenue through effective product demonstrations and client consultations of protection plans at Staples, leveraging expertise in the latest tech products.
- Provided exceptional after-sales support, resolving technical issues promptly and maintaining strong client relationships.

## PROJECTS

**Market Mood AI** ⧉ | *React.js, Node.js, Express.js, Flask, PostgreSQL, AWS EC2*                **Sept. 2024 – Present**
- Directing the creation of a full-stack web application, leveraging **React.js, Node.js, Express.js, Flask,** and **PostgreSQL** to deliver real-time stock sentiment analysis to users.
- Integrated the **Hugging Face Transformers library** for PyTorch and TensorFlow for tokenizing text scrapped from financial news articles to process them through a trained roBERTA based sentiment analysis model to obtain a positivity or negativity score on a stock.
- Managed **PostgreSQL database operations** to store and retrieve large volumes of sentiment data on stocks, headlines, and authors.
- Leveraged **Amazon EC2** to automate data fetching, sentiment analysis, and updates, ensuring the system remains up to date every 24 hours with the latest stock sentiments.

**Media Network Simulator** ⧉ | *C++, Make, Valgrind*                                           **Mar. 2025 – Apr. 2025**
- Developed a C++ media network application using object-oriented principles like **operator overloading**, **templates**, and **virtual inheritance** to model channels, media, and dynamic search functionalities, ensuring scalable and maintainable architecture.
- Designed a runtime-configurable media playback system using the **strategy pattern**, allowing seamless switching between audio-only and video modes with dynamically loaded ASCII art for visual elements.
- Developed a templated Array class for type-safe data storage and integrated rigorous memory management practices, leveraging **Valgrind** to achieve zero-leak reliability and optimal performance.
- Utilized **Makefile** for automated compilation/testing, adhering to modular software engineering best practices.

**kavenmuralei.ca** ⧉ | *HTML/CSS/JS, Node.js, AWS S3 & Route53*                                 **June 2024 – Sept. 2024**
- Engineered and deployed a modern and interactive portfolio website to present users and employer a visual display of skills and projects.
- Implemented **Node.js** to create an efficient backend, ensuring seamless data processing and server-side operations. Integrated the **Three.js library** with Node **Package Manager** to create a visually stunning 3D background in the website.
- Deployed the website on the AWS cloud infrastructure, utilizing **Amazon S3** for static web hosting and **Amazon Route 53** for domain management, ensuring high availability and reliability.
- Achieved maximum cost efficiency by keeping the website's operational costs **at < $0.8 per month**, excluding annual domain renewal.

## CERTIFICATION

**AWS Certified Cloud Practitioner** | AWS | ⧉                                                       **August 2024**

## TECHNICAL SKILLS

**Languages**: Java, JavaScript, C, C++, Python, PHP, HTML/CSS.
**Frameworks & Databases:** Node.js, Next.js, Express.js, SQL, AWS S3.
**Developer Tools:** Linux, Valgrind, Git, AWS, OpenStack, Android Studio.
**Libraries**: TensorFlow, OpenCV, Pandas, PyTorch, React.
**Machine Learning**: Computer Vision, Sentiment Analysis.