Ansh Kakkar

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Education

Carleton University **Expected 2028**

Bachelor of Computer Science Honors (Stream: Artificial Intelligence and Machine Learning) with CO-OP *Ottawa, Ontario*

- GPA: 3.98 / 4.00 — **Available May 2025 for 4, 8, 12 or 16 Months**
- Recipient of Tracey and Siva Ananmalay Scholarship in Computer Science and Maximum Faculty Scholarship

Skills

Languages: Python, Java, JavaScript, TypeScript, SQL, C/C++, HTML / CSS
Libraries / Frameworks: React.js, Tailwind CSS, Express.js, Next.js, Node.js, RESTful APIs, Selenium
Machine Learning / Data Science Tools: TensorFlow/Keras, scikit-learn, NumPy, Matplotlib, Pandas, Supabase
Developer Tools: VS Code, Intellij, Git, Github, Google Collab, Jupyter Notebook, Docker
Networking and Protocols: Basic understanding of TCP, UDP
Certifications: Diplôme d'études en langue française B1 French Certificate (2023)

Experience

Akshan Wine and Liquor **December 2024 – Present**

Web Developer *New York (Remote)*

- **Designed and deployed** a visually appealing website using **React and Tailwind CSS**, ensuring a user-friendly interface
- Integrated **Firebase to store and manage user inquiries** enabling efficient and secure handling of customer messages.
- **Collaborated effectively** with the admin team to tailor the website to business needs, ensuring accurate updates to product offerings and promotional content.

Carleton University **Sep 2024 – Dec 2024**

Undergraduate Discrete Math Teaching Assistant *Ottawa, Ontario*

- Managed grading, tutorials, and student support efficiently, **consistently meeting deadlines**
- Guided students in breaking down **complex discrete math problems**, enhancing their problem-solving abilities
- Continuously improved teaching methods through **ongoing professional development**

Projects

Car Price Prediction | *Python, scikit-learn, Pandas, Seaborn, Matplotlib, Machine Learning* **Dec 2024 - Current**

- **Preprocessed a car price dataset** from Kaggle by handling missing values, **encoding categorical variables**, and splitting data into training and testing sets.
- Visualized **key patterns and trends** in the dataset using **Matplotlib and Seaborn** to guide **feature engineering decisions.**
- Trained and compared the dataset on various **Machine Learning algorithms**, including **Linear Regression, Lasso, and LightGBM**, to achieve **optimal performance.**

Productivity AI Chrome Extension (1st Place Winner) | *React.js, TensorFlow, Python, Selenium, FastAPI* **Dec 2024**

- Collaborated in a team to develop a **Computer Vision** Chrome Extension to classify website productivity levels, earning **First Place** at the cuHacking **Computer Vision Hackathon.**
- **Led the development** of training a **Computer Vision model** by fine-tuning a pre-trained **MobileNetV2** in **TensorFlow**, enabling accurate classification of website screenshots as "Productive" or "Unproductive."
- **Automated data collection** by integrating **Selenium** capturing website screenshots for training and classification.

AI Portfolio Chatbot | *React.js, Next.js, Supabase Vector Database, OpenAI API, AI Development* **Aug 2024**

- Designed and developed a responsive **AI chatbot application** using **React.js** serving as a creative personal portfolio
- Implemented a **Retrieval-Augmented Generation (RAG)** model architecture to enhance response accuracy by combining embedding-based search and OpenAI's generative capabilities
- Utilized **Supabase Vector Database** for efficient **semantic search**, storing user data embeddings and retrieving queries

CIFAR-10 Classification | *Deep Learning, Python, TensorFlow, Pandas, NumPy, Mathplotlib* **Aug 2024**

- Developed a **Convolutional Neural Network (CNN)** to classify 60,000 images into 10 classes on the CIFAR-10 test dataset, achieving an accuracy of 75%
- Utilized **TensorFlow and Keras** for model architecture design and training to **optimize classification performance**
- **Preprocessed image data using Pandas and NumPy**, enhancing the model with resizing and normalization

Leadership / Extracurricular

Carleton Blockchain **Nov 2024 – Present**

Software Developer

- Collaborating in a team to maintain and update the Carleton Blockchain Website using **React, Typescript and Next.js**

Hack The Hill (Not for Profit Hackathon) **Jan 2024 – Dec 2024**

Partnerships Coordinator

- Secured over **$95,000** as a team, to organize **Ottawa's largest student-run Hackathon** with over **800+ attendees**