Sanjana Adiga

(289) 993-3100 | adigasanjana@gmail.com | linkedin.com/in/sanjana-adiga/ | github.com/sanj-adiga/

EDUCATION

Western University **London, ON, Canada**
Bachelor of Engineering Science, Software Engineering (BESc) Expected April 2026

- **Coursework**: Artificial Intelligence I/II, Machine Learning, Algorithms and Data Structures (Java), Databases (SQL, MySQL), Web Development (HTML, React, JavaScript, AWS, MongoDB), Software Construction (Python), Software Requirements (Jira).

SKILLS AND INTERESTS

Languages: Python, JavaScript, Java, C++, HTML, CSS, SQL, MATLAB.
Technologies: React, Angular, Django, MySQL, Node.js, Express, Raspberry Pi, Arduino, Oracle Cloud, Azure, Confluence, Jira.
Certifications: Google Cybersecurity Professional Certificate, Oracle Generative AI Professional Certificate.

WORK EXPERIENCE

Bay6 **Toronto, ON, Canada**
Software Developer September 2023 – Present

- Led the end-to-end development of a responsive website for a clothing startup within 3 months, leveraging **React**, **Tailwind CSS**, **Node.js**, **Express**, and **HTML** to support the launch of its first product, resulting in a 66% increase in monthly website traffic.
- Designed 20+ branding elements, mock-ups, and mood boards in Figma and translated them into a responsive website, collaborating with product and marketing teams to ensure a cohesive user experience and alignment with the company's vision.

IRIS Institute **Toronto, ON, Canada**
Software Developer Intern May 2022 – August 2022

- Elevated the company website's using **HTML**, **CSS**, and **JavaScript**, integrating accessibility features such as multilingual support, ASL video integration, and screen reader compatibility, fostering inclusivity and attracting 2,000+ monthly visitors.
- Created 3 marketing campaigns using **Figma** and **Salesforce** for an accessibility platform, effectively onboarding 100+ clients.

Precision E-Business Group **Burlington, ON, Canada**
Data Analytics Intern June 2021 – August 2021

- Built an internal applications using **Zoho Deluge** and **Zoho Analytics**, including an automated dashboard generator that analyzed spreadsheet data and projected revenue trends, improving workflows for 50+ users and reducing manual reporting time by 95%.

LEADERSHIP EXPERIENCE

WEMars, *Software Lead* September 2023 – Present

- Led a team of 5 software developers in programming a Mars Rover using **C++**, **Raspberry Pi**, **ESP32 Arduino**, enabling features like coordinate navigation, data transmission, and image stabilization, which reduced navigation errors by 40%.
- Implemented an on-board rover system using **C++** and **Python** for international competitions (CIRC, URC), transmitting real-time video and coordinates to prevent collisions, while collaborating with mechanical teams to ensure seamless integration.

Chem-E-Car, *Circuitry and Microprocessors Team Lead* September 2022 – April 2023

- Programmed motor control systems using **C++** and **Arduino**, integrating 10 photoresistors to detect onboard chemical changes and trigger mechanical systems to halt the car safely, ensuring precise maneuverability and reducing accidental collisions by 8%.

PROJECTS

Autonomous Vehicle Lane Detection – GitHub – Report

- Designed and implemented a hybrid lane detection system for autonomous vehicles using VGG16-UNet and traditional computer vision (OpenCV: Canny, Sobel, Hough Transform), achieving 97.72% validation accuracy on the TuSimple dataset.
- Engineered a full ML pipeline from EDA to model deployment, including data preprocessing, pixel-wise segmentation, performance evaluation and optimization (**Adam**); worked with **TensorFlow**, **Python**, and image analysis.

Astrolytics – GitHub – Report

- Built a machine learning model with **Python**, **NumPy**, **Pandas**, **Seaborn**, **Matplotlib**, **TensorFlow**, and **Scikit-learn** to predict sensory degradation of a rocket ship using a 4,200-point dataset from 21 different sensors, achieving an accuracy rate of 91%.
- Leveraged multiple prediction models, including random forest regression, linear regression, long-short-term memory (LSTM), and principal component analysis (PCA), to improve model accuracy, uncover patterns in complex datasets, and extract insights.

Scrub's Clean Sweep – GitHub – Demo

- Collaborated within a team of 4 software developers following the **Scrum** framework to develop a 2D platformer video game using **Python** and **Pygame**, incorporating custom-designed assets, increasingly challenging levels, and interactive minigames.