

# SALMAN CHOWDHURY

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## SKILLS

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**Programming:** Python, C, C#, HTML, CSS, JavaScript, Java, MySQL, PostgreSQL, MongoDB

**Libraries/Frameworks:** React/Next.js, Node.js, TypeScript, Tailwind, OpenCV, NumPy, Pandas, Matplotlib, scikit-learn, Spring Boot

**Technologies:** Linux, Windows, Git, GitHub, Docker, Google Cloud Platform, Wireshark

## EDUCATION

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**BSc[H] Computer Science with Software Engineering Specialization**

**Sep 2020 - Present**

University of Windsor · Windsor, ON

- **Key Courses:** Data Structures & Algorithms, Object-Oriented Programming, Artificial Intelligence Concepts, Computer Networks, Operating Systems Fundamentals, Database Management Systems, Statistics, Theory of Computation

## EXPERIENCE

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**Teaching Assistant**

**Jan 2024 – Apr 2024**

University of Windsor · Windsor, ON

- Supported **over 35** students by assisting in grading assignments, holding regular office hours for student inquiries, and providing additional guidance for a computer science undergraduate course

**System Administrator Co-op**

**Jan 2023 – Aug 2023**

FGF Brands · North York, ON

- Provided Level 1 and 2 helpdesk support to resolve IT issues for employees
- Supported time management functionalities in **Workforce Software Time Management**, **SAP SuccessFactors**, and **Active Directory**
- Administered and oversaw assignment groups and access control privileges of **3,000+** employees across **8** Canadian locations and **5** U.S. locations
- Managed shift schedules and attendance records for production line staff using Workforce Software Time Management and Active Directory

## PROJECTS

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**AI/ML-Based Soccer Match Analysis System** | <https://github.com/SChowdh1045/AI-ML-Soccer-Analysis-System>

- Developed an AI-based soccer match analysis system using **Python**, **OpenCV**, and **YOLOv8** for object detection and tracking
- Utilized K-means clustering algorithm to assign players to teams based on their jersey colors
- Applied the Lucas-Kanade method for optical flow estimation and the Shi-Tomasi algorithm for corner detection to detect camera movement
- Designed a perspective transformation algorithm to accurately convert camera images from pixel measurements to real-world dimensions, enabling precise analysis and measurement of objects in the video footage
- Implemented player-ball acquisition logic and a real-time speed and distance estimator, enhancing game dynamics analysis

**Nerdy Jobs** | <https://www.nerdy-jobs.schowdhury.online>

- Built a full-stack job portal application for developers using **Next.js**, **TypeScript**, and **PostgreSQL**, featuring search, creation, and application functionalities
- Used **Tailwind CSS** with **Shadcn-UI** component library for a responsive UI, while leveraging **Prisma ORM** for efficient PostgreSQL **CRUD** (Create, Read, Update, Delete) operations
- Added an admin panel to approve or delete pending job applications, ensuring quality control for job postings
- Implemented secure admin authentication and management using **Clerk**, enhancing application security and reliability

## SCHOLARSHIPS AND AWARDS

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**Dean's Honour Roll**

**Sep 2022**

University of Windsor · Windsor, ON

**Dean's Honour Roll**

**Sep 2021**

University of Windsor · Windsor, ON