LinkedIn: /in/aafreenkaur03 | www.aafreen.me | aafreenkaurrrr@gmail.com

Education		
Aerospace Manufacturing Engineering Technology (Advanced Diploma)	Centennial College, Toronto, ON	01/2023 – Present
GPA: 4.25		
Professional Experience		

Student Researcher Applied Research, Innovation & Entrepreneurship Services (ARIES)
Win Global (Project: Detailed Design of Drone)

(*Toronto, ON*) (Jan 2024- Aug 2024)

- Designed and developed an Unmanned Aerial Vehicle (UAV) utilizing Siemens NX, CATIA V5, and Fusion 360, with a focus
  on landing gear design and structural integrity.
- Performed **Computational Fluid Dynamics (CFD)** and **Finite Element Analysis (FEA)** using **ANSYS** to validate aerodynamic efficiency and structural durability.
- Developed and integrated avionics systems and control mechanisms, ensuring enhanced flight stability and automation.
- Authored detailed engineering reports, technical documentation, and system specifications to support Product Lifecycle Management (PLM).
- **Designed and refined manufacturing-ready technical schematics** in collaboration with industry partners for seamless **production and assembly integration**.

## MetalCraft Marine (Project: Custom Boat Rotating Jig Design)

(Aug 2023- Jan 2024)

- Led the end-to-end development of a **custom rotating jig for marine applications**, utilizing **Siemens NX and Rhino 3D** for advanced **3D modeling and assembly optimization**.
- Engineered and validated FEA simulations to assess structural integrity, fatigue analysis, and stress distribution under dynamic load conditions.
- Collaborated with cross-functional teams to streamline project planning, material selection, and logistics, optimizing manufacturing and operational feasibility.
- Generated detailed **CAD drawings** and **assembly layouts**, aligning with **GD&T standards** and ensuring compliance with **industry partner specifications**.

Additional Experience\_\_\_\_\_\_

## **IT Support Technician**

Centennial College – IT Department

(Sep 2024- Dec 2024)

- Diagnosed and resolved hardware and software issues, including monitor setups, network troubleshooting, and system configurations.
- Provided technical support to students and faculty, troubleshooting multi-platform software and ensuring seamless IT operations.
- Enhanced system reliability by collaborating with IT teams to maintain computer labs, cloud services, and network infrastructure.
- Optimized IT workflows by documenting troubleshooting procedures, improving efficiency and knowledge transfer for future technicians.

## **Technical Skills**

- CAD: CATIA V5 | SolidWorks | AutoCAD | Inventor | Siemens NX | Rhino 3D | Drafting | Kinematics | Geometric Dimensioning & Tolerancing (GD&T) | Part & Assembly Design
- Project Management: MS Project | Teamcenter | SAP Logon | Scheduling | Workflow Optimization
- CNC (Machining & Programming): Mastercam (Lathe/Mill) | 3-axis & 5-axis CNC Programming | FANUC Controller
- 3D Printing & Prototyping: GrabCAD | Insight | Bambu Labs
- Robotics & Automation: FANUC Roboguide | KUKA KRL | C & Python Programming | PLC Programming | HMI Automation Control | SCADA Systems | Ladder Logic
- Engineering Simulation & Analysis: ANSYS (Mechanical, ACP, Fluent) | MATLAB (PID Control)
- Quality Control & Inspection: CMM (Mitutoyo & Hexagon) | Statistical Process Control | X-bar Charts | ISO 9001 Standards

## **Certifications & Awards**

• AutoCAD Essential Training Linkedin Learning 11/2024

• SolidWorks Associate - Mechanical Design Dassault Systemes 04/2023

HAAS Mill & Lathe Operation Certificate
 Haas Automation Inc.
 03/2023