

Aafreen Kaur

North York, M3J 0B8 | (437)-429-5753 | www.linkedin.com/in/aafreenkaur03 | akau1132@my.centennialcollege.ca

Education

Aerospace Manufacturing Engineering Technology (Advanced Diploma) Centennial College, *Toronto, ON* 01/2023 – Present

GPA: 4.25

Related Experience

Student Researcher

Centennial Innovates | Applied Research, Innovation & Entrepreneurship Services (*Scarborough, ON*)

Detailed Design of Drone | Industry Partner: **Win Global** (Jan 2024- Aug 2024)

- Generated detailed design of **Unmanned Aerial Vehicle** using advanced CAD software (**Siemens NX, Catia V5 and Fusion 360**), participated in the designing of **Landing gear**.
- Execute comprehensive **CFD** and **FEA** using **ANSYS** to validate and optimize the design.
- Conducted extensive research on drone technology and avionics components, enhancing project relevance and innovation.
- Compiled detailed **technical reports**, including design modifications, analysis results, and recommendations for improvements. Managed the creation of the Bill of Materials (**BOM**) and drawings to streamline manufacturing processes.

Custom Boat Rotating Jig Design | Industry Partner: **MetalCraft Marine** (Aug 2023- Jan 2024)

- Oversaw the end-to-end design process for modeling and assembly using **Siemens NX, Rhino 3d**
- Conducted **FEA** under various load directions and weight distributions to assess structural integrity and performance under different operational conditions
- Authored comprehensive technical reports at the end of each design phase to document findings, methodologies, and recommendations and drawings.
- Worked with engineers, designers, and project managers, using strong communication skills to facilitate team collaboration and achieve project milestones.

Additional Experience

Integrated Services IT Support Technician

(Sep 2024- Present)

Centennial College – IT Department (*Scarborough, ON*)

- Troubleshooting and repairing hardware issues, including monitor setups and configurations.
- Providing technical support to students and staff, resolving software-related issues across various platforms.
- Guiding students through troubleshooting and resolving issues with the college portal to enhance user experience and access to services.
- Collaborating with the IT team to manage and maintain college computer labs and network systems.
- Ensuring timely resolution of technical issues to support seamless operations in academic and IT environments.
- Maintaining organized documentation of technical support activities and processes for improved workflow efficiency.

Administrative Assistant

(Feb 2023- Aug 2023)

Mangat Law Office (*Brampton, ON*)

- Facilitated communication between clients and attorneys, ensuring smooth information flow and timely updates, essential for maintaining operational efficiency.
- Organized and maintained detailed case files and documentation, applying strong organizational skills to track deadlines and ensure data accuracy.
- Coordinated multiple schedules and appointments, demonstrating effective time management and prioritization of tasks across various teams.
- Developed and implemented administrative procedures to streamline office operations, enhancing overall productivity and task efficiency.

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Professional Summary

Skills:

- CAD software like **CATIA V5, Solidworks, AutoCAD** and **Siemens NX** with the ability to perform **part design, assembly, surfaces, kinematics, and drafting**.
- Engineering simulation software like **ANSYS including Mechanical, ACP and Fluent** to perform **FEA** (Finite Element Analysis) and **CFD** (Computational Fluid Dynamics)
- **GD&T interpretation** as well as ability to perform **tool design** using **CATIA V5**
- Programmed and prototyped electrical circuits with **Multisim, MATLAB**, and breadboard assemblies; performed **soldering** tasks for UAVs and avionics systems.
- Ability to read and interpret basic **electrical schematics**; experience in cable routing and circuit layout in academic projects
- Conducted material testing, including **hardness, stress, and fatigue** analyses, while utilizing **CMM, Mitutoyo, and Hexagon** for quality control inspections.
- Using **SPC software** to monitor quality control processes, including the application of X-bar charts
- Proficient in project scheduling and resource management with **MS Project** and **Teamcenter**.
- Skilled in **automation** and control using **TIA Portal** in lab settings.
- Experienced in process simulation and optimization using **Tecnomatix** for enhanced **manufacturing efficiency**.
- Hands-on experience with 3D printing for prototyping small components, with software like **GrabCAD** and **Insight**.
- Programmed **3-axis and 5-axis** CNC machines with **Mastercam**, and operated CNC machining centers (Lathe/Mill) with FANUC controllers.
- Experience with composite materials including **wet layup, autoclave** and **carbon fiber** fabrication.
- Worked with **hydraulic** and **pneumatic** circuits in lab settings.
- Hands-on experience in **drilling** and **riveting** processes within lab settings

Soft Skills:

- Excellent teamwork and communication skills for effective collaboration; and strong adaptability to learn new technologies.
- Skilled in employing critical thinking and problem-solving strategies for crafting innovative solutions.
- Trained in WHMIS and well-versed in the Occupational Health and Safety Act, ensuring compliance with workplace safety protocols.
- Proficient in Microsoft Office Suite for project documentation, meeting scheduling, correspondence, and project management support
- Skilled in conducting detailed research, data analysis, and preparing comprehensive reports and presentations for stakeholders.
- English, Hindi, Punjabi – *All professional proficiency or above, Basic French*

Projects

- Light/Dark Sensor
- SONAR Working Model
- UAV Gripper Design

Certificates

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|---|----------------------|--------------------|
| • CornellIX: A Hands-on Introduction to Engineering Simulations | Cornell University | Currently Enrolled |
| • SolidWorks Associate - Mechanical Design | Dassault Systemes | 04/2023 |
| • HAAS Mill & Lathe Operation Certificate | Haas Automation Inc. | 03/2023 |
| • French A1 Level | Alliance Francaise | 06/2022 |

References available upon request