Maryam Qureshi

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PROFILE

- Space enthusiast with hands-on experience with mechanical design and analysis for spacecraft
- Proficient with 3D printing, SolidWorks, Catia V5, Siemens NX, stress analysis, and Excel VBA
- Eager to learn and collaborate with strong listening, critical thinking, and problem-solving skills

EDUCATION

BEng in Mechanical Engineering   **Sept 2029 - Jun 2033**
Concordia University

Relevant courses: Finite Element Analysis, Fundamentals of Vehicle Systems, Vehicle Dynamics, Flight
              Control Systems, Avionic Navigation Systems, Machine Element Design

SKILLS & LANGUAGES

- **Technical skills:** Arduino, ANSYS, AutoCAD, CATIA V5, Excel, Siemens NX, SolidWorks
- **Programming Languages**: C++, MATLAB
- **Other**: 3D printing, Composite Materials Design, and Manufacturing, data analysis, manufacturing processes, Microsoft Office (Word, PowerPoint), rapid prototyping, stress analysis, structural testing
- **Languages (Spoken & Written)**: English, Hindi, Urdu

CAREER-RELATED EXPERIENCE

Spacecraft Division Member (Mechanical Systems)   **Jan 2032 – Present**
Space Concordia, Montreal, QC
- Work with Spacecraft division on SC-ODIN cube satellite structure (launching December 2033)
- Design structural components for satellite assembly with CATIA V5, Siemens NX, and SolidWorks
- Generate Bill of Materials (BOM) for assembly drawing and production
- Rich experience in Rapid-prototyped structural components with 3D printing, CAD, and Arduino
- Liaise with 8 other divisions to acquire data and test the feasibility of spacecraft technologies
- Conduct 3D printing workshops and training sessions for 15+ members

Mechanical Engineering Intern (Space Exploration Development)   **May 2032 - Aug 2032**
Canadian Space Agency (CSA), Saint-Hubert, QC
- Designed 3D printed manufacturing components for lunar rover using Siemens NX
- Produced several prototypes based on comprehensive mass analysis and other findings
- Developed spring system model with Excel VBA based on weight and force engineering analysis, reducing mass for later iterations by 45%
- Refined lunar rover's collision bumper and emergency brake system by designing, machining, assembling, and testing prototypes meticulously

ACADEMIC PROJECTS

Robotic Arm for Lunar Exploration (Capstone project)   **Fall 2032**

- Collaborated with 6 students to create a prototypical mechanical robotic arm for use on rovers in lunar environments under Canadian Space Agency's (CSA) supervision
- Defined low-level feature requirements for system compliance and design feasibility based on CSA's system requirements
- Designed components and drivetrain for assembly using SolidWorks
- Assessed prototype's Technology Readiness Level (TRL), obtaining level 4 partially

Rover's Brake & Clutch Pedal System   **Winter 2031**

- Drafted 2D and 3D drawings for rover's construction designs and documents using AutoCAD
- Optimized 3D CAD modeling and simulation using ANSYS, saving 5% on material cost estimation
- Calculated, analyzed, and sized rover's brake and clutch pedal system using Excel and MATLAB
- Created, modified, and produced design parts and assembly using SolidWorks and 3D printing

OTHER WORK EXPERIENCE

Lab Demonstrator   **Sept 2032 – Apr 2033**
Concordia University, Montreal, QC

- Trained 40+ mechanical, industrial, and aerospace engineering students on Arduino and ANSYS
- Developed practical assignments for students and evaluated 100+ lab reports promptly

Warehouse Associate   **Sep 2028 – Dec 2030**
Amazon Fulfillment Center, Montreal, QC

- Worked with 5+ warehouse associates to process, package, and ship 50+ orders accurately daily
- Maintained accurate records of stocks and merchandise shipped and received on the company database

VOLUNTEER EXPERIENCE

Face Shield Maker   **Sept 2031 – Apr 2032**
Concordia University, Montréal, QC

- Coordinated with 50+ students and professors to supply 500+ personal protective equipment (PPE) for Centre Hospitalier de l'Université de Montréal (CHUM)
- Designed, drafted, modeled, and prototyped face shields with 3D printing and CAD
- Trained and mentored 25+ volunteers in Montreal on 3D printing processes

LICENSES & CERTIFICATIONS

Hazardous Waste Disposal Training for Lab Personnel   **Jan 2032**
Concordia University
Exp. Jan 2036

Workplace Hazardous Materials Information System for Lab Personnel (WHMIS) **Jan 2032**
Concordia University
Exp. Jan 2036