Parth Agarwal

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SUMMARY OF QUALIFICATIONS

- Proficient in Metal powder Characterization (density, charge, cohesion, size distribution, rheology), Arduino, Oscilloscopes, Office 365, AutoCAD, SolidWorks, PCB/Circuit design, and Latex.
- Good with Java, Python (numpy, math), Kotlin, XML, Android Studio and MATLAB.
- Familiar with Metal 3D Printing (Additive Manufacturing), HTML, CSS, C++, Raspberry Pi, NI myDAQ and LabVIEW.
- Influential **leadership, communication, and teamwork skills** used to complete projects and trainings at MSAM Labs, high school Robotics Club and Camp Counsellor roles.
- Excellent **Time-management skills** shown by high performance in stressful situations while characterizing a **dozen** powders at MSAM Labs, working on Kotlin coding projects and through performances in the 2019 Ontario Skills Competition.
- Achieved an **Excellent performance rating** at MSAM Labs by demonstrating proficiency within a professional lab and office environment.

EXPERIENCE

Research Assistant: Additive Manufacturing Materials Developer May 2021 - Aug 2021

MSAM Labs | Waterloo, ON

- Collaborated with all senior lab members effectively to increase safety and planning within the lab by completing inventory and labelling of **over 600 dangerous and volatile chemicals**.
- Demonstrated distinct **Critical Thinking skills** by Updating Standard Operating Procedure of various machinery and creating a standard powder labelling system, **enhancing workflow** and **organization** for all current and future lab members.
- Efficiently Characterized and completed reports for **12 metal powders** with error in raw data within **only 5%**.
- Operated equipment such as the Granutools suite, FT4 Powder Rheometer and Camsizer X2 PSD analyzer to finish all projects **2 weeks** ahead of schedule.
- Restructured personal schedule on short notice to train 2 inexperienced Co-op students and a **PhD candidate** on lab protocol and characterization machinery displaying dynamic **leadership, communication, responsibility** and **time-management skills**.

Robotics Club Sep 2018 - May 2020

Executive Member | Pickering, ON

- Participated in and led Robotics meetings with approximately 20 members authoritatively and efficiently building **leadership** and **communication** skills.
- Developed **critical thinking skills** by creating, teaching and testing various aspects of autonomous and semi-autonomous robots for the 2020 Ontario Skills Competition using **Raspberry Pi** and **Arduino**.
- Implemented **engineering strategies** with a partner to solve problems in the robotics and automation industry at the the 2019 Ontario Skills Competition **placing 6th overall** for the Robotics and Control Systems event.

PROJECTS

Glucose Detector

Nano Design-Days

- Comfortably collaborated with a newly-formed team of 5 to design a 3D-printed image box with LED lighting using SolidWorks.
- Successfully photographed an inserted a Lateral Flow Assay (LFA) created with a reaction between glucose and Gold Nano-particles.
- Worked closely with colleagues to efficiently create a MATLAB algorithm that discerned glucose levels based on colour of the LFA to inform users of a prognosis of non-diabetic, pre-diabetic or diabetic.

EDUCATION

Candidate for BASc Nanotechnology Engineering Co-op Sept 2020 - Present

University of Waterloo | Waterloo, ON

- President's Scholarship
- 1B - Term Dean's Honours List

Soccer Fanatic | Astronomy Enthusiast | Animal Lover | Cinema Buff