Dear Hiring Manager,

I am writing to express my keen interest in the Image Processing and Computer Vision Specialist position as advertised on Indeed. As a Master's student in Electrical and Computer Engineering at the University of Alberta, I have developed a strong foundation in both hardware and software, enabling me to effectively develop and apply machine learning algorithms to solve complex problems.

My coursework has equipped me with a comprehensive understanding of the field. For instance, my Digital Integrated Circuits and Design course provided in-depth knowledge of integrated circuit design, culminating in a project where I designed a custom Tensor Processing Unit capable of operating at 0.167 GHz. Additionally, courses in Biomedical Image Processing, Machine Learning, and Data Analysis in IoT and Wearables have solidified my foundational understanding of machine learning and data analysis. Pertaining Image Processing techniques I have learned about various image processing techniques like Otsu's algorithm and Active Contouring. Finally, in these courses I have learned how to build complex CNN models like R-CNN, Fast R-CNN, Yolo.

Beyond coursework, I have actively pursued hands-on experience through machine learning and artificial intelligence projects. I successfully trained a CNN model to accurately detect Coronavirus from chest X-ray images and another CNN-based model to classify arrhythmia in ECG signals. These projects allowed me to develop expertise in hyper-parameter tuning, neural network optimization, regularization, and signal processing techniques. My resume, attached for your review, further details my academic and professional experience in software engineering, machine learning and artificial intelligence. Additionally I am applying these skills in a competition called the ISIC 2024 data challenge where I currently rank 1500/1900.

I am excited about the potential of your products and services to revolutionize industries and improve lives. I believe my skills and passion align perfectly with NAIT's mission, and I am eager to contribute to your team's effort in developing cutting-edge solutions. I am confident in my ability to leverage my experience to tackle challenges, maintain existing models, and adopt best practices.

Thank you for considering my application. I look forward to the opportunity to discuss my qualifications further and learn more about the Image Processing and Computer Vision Specialist position.

Sincerely,
Alton Lavin D'souza