WPI

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Dear Hiring Manager,

My name is Devesh Datwani and I am a second year graduate student pursuing Robotics Engineering at Worcester Polytechnic Institute, Worcester, USA.

This cover letter is an attempt to articulate my skill set & passion for robotics, computer vision & deep learning.

My robotics journey began right from high school when I started building fixed wing aircraft to satiate my passion for aeronautical engineering. During my stint, I built aircraft powered by gas & electric motors, experimented with various composites & enabled cruise control autonomy with PID controllers.

To now fortify my hobby turned passion, I pursued an undergraduate program in mechanical engineering to develop knowledge in subjects of engineering mechanics, fluid mechanics, electronics & high level programming. For my undergraduate dissertation, my team & I designed a research project to design plasma actuators for flow induction inside hollow pipes. The experiments for this project were conducted at the Propulsion Lab at the Aerospace Department of IIT, Bombay using a one of a kind transformer. Having observed exciting results, my team and I decided to apply for a utility patent for our device.

With exciting achievements in the space of AI and limitations of innovation in mechanical engineering, the natural next step in my journey was to pursue a Masters program that helps me develop the necessary skills to build autonomy for robots. This led me to pursue MS in Robotics Engineering at WPI. Shortly after joining, I was selected to represent WPI at the NASA Extreme Challenge 2022 where my team and I were responsible for building a novel robot mechanism for Martian surface exploration. My stint at WPI involves academics & projects in the space of general robotics, deep learning & computer vision.

WPI has provided me with exciting opportunities of working at the Popovic labs, Surface Meteorology Lab & Human Inspired Robotics Lab which enriched my skill-set with invaluable experience of solving engineering problems with computer vision & machine learning techniques.

Through this cover letter, I would like to highlight one of the exciting projects I was a part of under the capstone experience at WPI. The project was tailored to cater home owners for maintaining real time fire safety preparedness. After extensive consultations with the Chief and Deputy Chief of the Worcester Fire Department, my team and I developed a novel approach for preventing fatalities during fire hazard situations with SLAM, computer vision and motion planning methods. This experience demonstrates my technical skills, ability of stakeholder engagements, identifying the problem statements & think critically to build robotics solution tailored for the end user.

With this, I submit to your fine sense of judgement to make a call on my application.

Sincerely,

Devesh Datwani