IOWA STEM TEACHER EXTERNSHIPS — CONNECTING CLASS TO CAREER

GREATNESS STEMS FROM IOWANS

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Part I: Overview of Workplace

Pearson is one of the world's leading education companies offering a variety of educational tools including online testing and digital content.

Part II: Workplace Focus

The specific group I am working with develop and run much of the online testing and digital tools. Their products are created and managed through the AWS cloud platform. For instance, they provide cloud based CS lab resources for schools that don't have the physical hardware typically needed for graphics intensive or computationally intensive software. Such as CAD design software need in PLTW courses. I plan to leave this externship with a AWS Cloud Practitioner Certification.

Part III: Introduce the Problem

Students have little to no exposure to AI and machine learning concepts but utilize them heavily in their everyday life. This project work is meant to give students a fun introduction to those concepts through a the training of a virtual or physical self-driving vehicle using the AWS DeepRacer platform including a possible physical car.

The project can end in either a virtual or physical example of a self-driving vehicle depending on the school resources.

Part IV: Standards, Driving and Essential Questions

This can be a good way of addressing a Engineering Practices standard from NGSS or as of yet determined CS standards in my district.

The main underlying question driving this investigation either way is to understand some of the basic processes and tools used in machine learning and AI systems generally.

Part V: Extern Host Role

My extern host Jim Sherlock has expressed a strong interest in directly engaging with students on this as a project or having additional Pearson employees engaging with students.

Part VI: Student Learning

Students have a large amount of choice in the training process but it does narrow students' choices otherwise due to the use of the AWS DeepRacer platform. Students will have a lot of opportunities along the way for reflection given the iterative nature of the software design process.