

# CASE STUDY

Durham College's  
Office of Research  
Services, Innovation  
and Entrepreneurship  
(ORSIE)

Oshawa, Ontario



1-888-783-PARK (7275)

PreciseParkLink.com



"I see a real commitment to talent development at Precise ParkLink. They work with our students to help them advance their skills, which is something we are very proud of."

**Debbie McKee Demczyk**

*Dean, Research Services, Innovation  
and Entrepreneurship  
Durham College*





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**Joe Ritacca**

*Director, Research and Development  
Precise ParkLink*

### Durham College’s Office of Research Services, Innovation and Entrepreneurship (ORSIE)

*Giving students a hands-on industry experience.*

Applied research at Durham College, facilitated by ORSIE, solves industry and social challenges through innovation and collaboration.

By engaging industry, faculty, students, and the community-at-large in research projects, ORSIE addresses the needs of a technology-driven knowledge economy. ORSIE is the single point of contact for industry, government, and community groups interested in collaborative applied research that has an impact. The talent, facilities, and capabilities of those within the campus and community have the

power to advance economic prosperity within the Durham Region.

#### *ORSIE Industry Partner*

Precise ParkLink and Durham College’s working relationship began in 2015 when the college selected Precise ParkLink as its parking management services provider. Since then, this partnership has evolved beyond parking, as Precise ParkLink helps facilitate student education by being an industry partner for ORSIE.

### Proactive Research and Development

*Identifying Opportunities for ORSIE students.*

Each year, Precise ParkLink’s Research and Development division meets to brainstorm its wish list of proactive solutions that can be developed to contribute to our customers’ success as well as our own internal business needs. As an ORSIE industry partner, we identify suitable opportunities during this process that ORSIE can be involved in.

In 2018, we identified a project involving the integration of artificial intelligence (AI) with parking access and control that ORSIE students could assist with: an AI-powered virtual parking assistant kiosk capable of answering questions related to parking regulations.





“The skills I gained working on a Precise ParkLink and ORSIE joint project was a solid foundation in AI. Additionally, it helped me in my current role at Precise ParkLink to estimate project deadlines and do requirements gathering—basically all the foundations to making an application.”

**Justin Waltenbury**

*Junior Software Engineer, Research & Development  
Precise ParkLink*

## AI in Parking Becomes a Reality

*Successful results from a mutually beneficial relationship.*

ORSIE students selected for this project were given the opportunity to work on an AI solution that would help improve thousands, if not millions, of day-to-day parking experiences across Canada.

From the get-go, the students dove deeply into the fundamentals of AI and learned what was required to make it functional for Precise ParkLink’s project. The first phase of the project involved creating an AI application, named Joy. The second phase of the project involved establishing a seamless integration between the AI application—Joy—and hardware components—the kiosk. ORSIE students were designated a Precise ParkLink

mentor, Justin Waltenbury, Junior Software Engineer and ORSIE alumni who oversaw the project full-time.

To date, students from the ORSIE program have:

- Developed a multilingual language function for the virtual parking assistant
- Optimized AI development turn-around time
- Created a feedback system to improve response accuracy

## The Results

*Integrating the project into society.*

After 8 months of hard work, ORSIE and Precise ParkLink unveiled Joy, the first-ever AI-based virtual parking

assistant deployed in Canada. Today, Mr. Waltenbury and the ORSIE students continue to develop Joy on an on-going basis.

Joy’s new home is in the main foyer of Humber River Hospital, where she continues to learn through public interaction, studying the many different ways the human brain works in order to ensure responses to staff, patients and visitors at Humber River Hospital are correct. Both ORSIE and Waltenbury continue to work diligently to improve Joy’s day-to-day performance, functionalities and user interface, and experience design elements. Some would argue she’s the coolest science project ever.

“Joy is the Siri of parking,” says Waltenbury. “On a fundamental level, the solution works in the exact same way.”



[www.preciseparklink.com](http://www.preciseparklink.com)

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**Vibha Tyagi**  
*Manager, Applied Research Partnerships  
Durham College*

### Final Words

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required to enter the workforce while also offering our customers the latest and the greatest technology available in the marketplace. Precise ParkLink is devoted to ORSIE and its students by annually committing to proactive research and development projects that we know we are capable of integrating into society.”

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