

# Ingrid Navarro Anaya

## Computer Vision Intern at Carbon Robotics

in [linkedin.com/in/ingridnavarroan](https://www.linkedin.com/in/ingridnavarroan) [github.com/navarrs](https://github.com/navarrs)

### RESEARCH EXPERIENCE

#### Robotics Institute Summer Scholar at the Navigation Laboratory (Navlab) Carnegie Mellon University

📅 June 2018 – Aug 2018      📍 Pittsburgh PA, USA  
Research on semantic segmentation of highly sparse 3D LiDAR data from low-end sensors using Deep Learning.

#### Robotics Institute Summer Scholar at the Navigation Laboratory (Navlab) Carnegie Mellon University

📅 June 2017 – Aug 2017      📍 Pittsburgh PA, USA  
Research on object classification and detection systems using Deep Learning algorithms to perform detection of wheelchairs in cluttered environments.

### WORK EXPERIENCE

#### Computer Vision Engineer Carbon Robotics

📅 July 2019 – Present      📍 Guadalajara, México  
Participating in the design, implementation and evaluation of the computer vision software for a robotic arm for manufacturing tasks.

#### Computer Vision Engineer X-LAB Protexa R&D

📅 Dic 2018 – June 2019      📍 Monterrey NL, México  
Worked in collaboration with PROESA Company to design an automatic visual inspection system to find paint defects on vehicle components.

#### Electronics Engineering Intern Omius Robotic Clothing

📅 Dic 2016 – May 2017      📍 Monterrey NL, México  
Participated in the design of a jacket that adapts based on the physical activity of a person and the environment conditions to help regulate body temperature.

### ACADEMIC PROJECTS

#### Computer Vision Team Lead at VantTEC (Unmanned Autonomous Vehicles Lab) Tecnológico de Monterrey

📅 Jan 2018 – May 2019      📍 Monterrey NL  
Lead the research and development of the perception system of an autonomous robotic boat for the International RoboBoat Competition by RoboNation.

### PUBLICATIONS

#### 📄 Working Papers Journal Articles

- Navarro, I. and L. Navarro-Serment (2018). “Real-Time Semantic Segmentation System of Sparse LiDAR Point Clouds using Lightweight CNNs and Recurrent CRF”. in: *RISS Working Papers Journal* Vol. 6, pp. 105–111.
- Navarro, I. and L. E. Navarro-Serment (2017). “A Faster RCNN-Based Wheelchair Recognition System”. In: *RISS Working Papers Journal* Vol. 5, pp. 125–132.

#### 👥 Conference Proceedings

- Navarro, I., A. Herrera, et al. (2018). “Data Augmentation in Deep Learning-based Obstacle Detection for Autonomous Navigation on Aquatic Surfaces”. In: *Advances in Computational Intelligence. 17th Mexican International Conference on Artificial Intelligence, MICAI 2018, Guadalajara, Mexico, Proceedings, Part II*. vol. 11289. Springer International Publishing, pp. 342–353.

### EDUCATION

#### B.S. in Digital Systems and Robotics ITESM - Tecnológico de Monterrey, México

📅 Aug 2014 – May 2019  
GPA: 94 / 100

#### Computer Engineering Exchange Student École Polytechnique de Montréal, Canada

📅 Aug 2017 – Dic 2017

### CERTIFICATIONS

🔄 IBM Introduction to Data Science  
IBM, Coursera (May 2019)

🔄 Neural Networks and Deep Learning  
DeepLearning.ai, Coursera (Jan 2018)

🔄 Machine Learning  
Stanford, Coursera (Oct 2017)

### ACHIEVEMENTS

🏆 Top student of the School of Engineering  
Tecnológico de Monterrey (Apr 2018)

🏆 RoboCup Platform Soccer League  
Competition, 1st place.  
Mexican Robotics Tournament (Mar 2018)

🏆 Emerging Leaders in the Americas Program  
(ELAP) Scholarship Recipient  
Government of Canada (Aug 2017)

🏆 Hackathon MTY, Junior Category, 1st Place  
Major League Hacking (Mar 2016)

### TECHNICAL SKILLS

#### Programming Languages

- C / C++, Python

#### Others

- Tensorflow
- ROS, OpenCV, MATLAB
- Linux, Windows

### LANGUAGES

Spanish (Native)

English (TOEFL IBT 100)

French (DELFB2)

### INTERESTS

Computer Vision

Deep Learning

Operating Systems

NLP

Robotics