INGRID NAVARRO ANAYA

Former Computer Vision Intern at Carbon Robotics

navarrs.github.io github.com/navarrs linkedin.com/in/ingridnavarroan

RESEARCH EXPERIENCE

Robotics Institute Summer Scholar

Carnegie Mellon University

June 2018 – Aug 2018 Pittsburgh PA, USA

Research on semantic segmentation of sparse 3D LiDAR data from low-end sensors using Deep Learning.

Robotics Institute Summer Scholar

Carnegie Mellon University

June 2017 – Aug 2017 Pittsburgh PA, USA

Research on object detection systems with Deep Learning and Data Augmentation to perform detection of wheelchairs in cluttered environments.

WORK EXPERIENCE

Computer Vision Engineering Internship

Carbon Robotics

July 2019 – Sept 2019 Guadalajara, México

Participated in the design of a scheme to evaluate camera calibration accuracy using an OptiTrack motion tracking system and image-based plane detection techniques.

Computer Vision Engineering Internship

X-LAB Protexa R&D

Dic 2018 – June 2019 Monterrey NL, México

Design of an automatic visual inspection system to find paint defects on vehicle components using Deep Learning.

ACADEMIC PROJECTS

Perception System of Autonomous Boat

VantTEC Research Group at 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.

Smart Jacket

Omius Robotic Clothing and Tecnológico de Monterrey

Dic 2016 – May 2017 Monterrey NL, México

Participated in the design of a jacket that helps regulate body temperature based on the physical activity of a person and the environment conditions.

SkyQuest

Inflection Point Systems and Tecnológico de Monterrey

May 2016 – Nov 2016 Monterrey NL, México

Coordinated a project to send weather balloons into the stratosphere to perform real-time data streaming to monitor weather conditions.

EDUCATION

BS in Digital Systems

ITESM - Tecnológico de Monterrey, México

Aug 2014 – May 2019

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

Operating Systems

- Linux
- Windows

Others

- Tensorflow
- ROS
- OpenCV
- Git, Bitbucket, Jira

LANGUAGES

Spanish (Native) French (DELF B2) English (TOEFL IBT 100)

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.

Poster Sessions

- Navarro, I. (2019). *Semantic Segmentation System of Sparse LiDAR Point Clouds using Lightweight CNN in: Taller Sobre Deep Learning y Ciencia de Datos, CIMAT-INAOE 2019, Guanajuato, Mexico.*

INTERESTS

Software Development
Computer Vision
Deep Learning
Machine Learning
Data Science
Operating Systems
Microcontrollers
Embedded Software
Robotics