Gustavo Gratacós

CONTACT
INFORMATION

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St. Louis, MO 63102

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EDUCATION

Washington University in St. Louis, St. Louis, MO

Ph.D. Computer Science, May 2024

University of Puerto Rico, Río Piedras Campus, San Juan, PR

B.S. Computer Science and Mathematics, December 2018

- GPA: 3.78

EXPERIENCE

Doctoral Reaserch in the Computer Graphics Lab
Plant Segmentation and Tree Estimation   2020 to present
- Mentored by Professor Tao Ju.
- Worked on segmenting overhead images of plants.
- Currently designing algorithms to recover the shapes of Tree-like structures from 2D and 3D images.

Washington University in St Louis Summer Engineering Fellowship
Image Restoration with Patch-wise Sparse Learning   2018
- Mentored by Dr. Ulugbek Kamilov.
- Worked on dictionary learning algorithms to improve the quality of biomedical images.

Marquette University MSCS REU - Summer Research for Undergraduates
Extending the MUzECS Platform   2017
- Mentored by Dr. Dennis Brylow.
- Worked on MUzECS, a music-based Computer Science Education platform for high school students.

Undergraduate Research in University of Puerto Rico-Río Piedras
Low Stretch Spanning Trees   2015 to 2017
- Mentored by Dr. Edusmildo Orozco and Dr. Ioannis Koutis
- Worked on making efficient algorithms to compute a low stretch spanning tree for a given graph.
- These algorithms can aid in solving systems of differential equations.

Undergraduate Research in University of Puerto Rico-Río Piedras
Programming via Speech Recognition   2014
- Mentored by Dr. Patricia Ordoñez.
- Worked on software that granted the user the ability to program via speech recognition.

ADDITIONAL
EXPERIENCE

Member of Student Organization
AECC - Computer Science Student Association   2018
- Computer Science organization that contains a Machine Learning Interest Group, offers workshops, among other things.

ACM Programming Competition
ACM National and Caribbean Competitions   2015/2016
- Qualified to the Caribbean competition in Dominican Republic.
- Third place medal in Dominican competitions.

ACM Programming Competition
ACM National and Caribbean Competitions   2014/2015
- Qualified to the Caribbean competition by obtaining first place within the university and third place in the Puerto Rican nationals.
- First Puerto Rican team to win a medal in the 2016 Caribbean Competitions.

Awards

Award Name
Dean's Select PhD Fellowship   2019
Washington University in St Louis Summer Engineering Fellowship   2018
NSF Award ACI-1461264 (Summer REU)   2017
Claude Shannon Grant   2015 to 2018

Presentations

Annual North American Plant Phenotyping Network Conference (2021)
- "Temporally Consistent Multi-label Plant-level Segmentation of Overhead Images for High-throughput Phenotyping"

WUSEF Research Symposium, Department of Engineering, Washington University in St Louis. (2018)
- "Image Restoration with Patch-wise Sparse Learning"

SIDIM 2018 - Seminario Interuniversitario de Investigación en Ciencias Matemáticas, Department of Mathematics, University of Puerto Rico. (2018)
- "Neural Networks and Word Embeddings"

Marquette MSCS REU Research Symposium, Department of Mathematics, Statistics, and Computer Science, Marquette University. (2017)
- "Integrating Circuit Playground with the MUzECS Software"

Programming
Languages

Proficient: C/C++, LaTeX, MATLAB, Python
Familiar: Mathematica, C#, Haskell, Javascript, Julia, R, SML, SQL, PHP, HTML