Yesenia Velasco / Computer Science

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Summary

To bring passion, motivation, and intellect to a team of like-minded individuals by investing in the success of my team and continued dedication to my own personal and professional growth. With my experience and work ethic, I aim to become an established and vital contributor to my team and organization.

Technical Skills

- Proficient in C/C++, Python, Java and experience with Matlab, HTML, CSS
- Vehicle-to-Vehicle Messaging
- Vehicular Ad-Hoc Networks
- Software Define Networks
- Neural Networks
- Distributed Computing
- Technical Writing
- Languages (Spanish-Fluent in Speaking and Writing)

Education

Duke University, Durham, NC − M.S in Computer Science − 2016-2018

North Carolina Central University - B.S in Computer Science and Mathematics—2012-2016

Employment Experience

- Teacher's Assistant, Duke University, 2017-2018

Assist the professor in managing the course, students, grades, and undergraduate TA's.

- Math and Computer Science Tutor, North Carolina Central University, 2014-2016

Tutor students individually or in small groups in various math and computer science subjects.

- CAT Vehicle REU Intern, University of Arizona, Tucson, AZ, 2015 summer

Implemented a hybrid model predictive controller for path planning and obstacle avoidance of an autonomous vehicle.

- Rams Intern, Oak Ridge National Laboratory, Oak Ridge, TN, 2014 summer

Helped to work with finite memory automata reconstruction from data with an application in predicting cancer cell tumor growth using the General Systems Problem Solver.

- Intern, Idaho National Laboratory, Idaho Falls, ID, 2016 summer

Worked on simulating the cold cap physics of a nuclear waste melter using Star-CCM+ modeling software, C, and Matlab.

Projects

Neighboring Vehicle Behavior Prediction Using A Gated Recurrent Unit Neural Network

Provide a new method of neighboring vehicle maneuver prediction by utilizing a Gated Recurrent Neural Network. CAN data collected from neighboring vehicles via Vehicle-to-Vehicle messaging is collected and fed into the model for real-time route prediction.

Publications

- ePrivateEye: To the Edge and Beyond!. Christopher Streiffer, Animesh Srivastava, Victor Orlikowski, **Yesenia Velasco**, Vincentius Martin, Nisarg Raval, Ashwin Machanavajjhala, and Landon P. Cox. *SEC 2017*. San Jose, CA, October, 2017
- Donghyun Kim, **Yesenia Velasco**, Wei Wang, R.N. Uma, Rasheed Hussain, Sejin Lee, "A New Comprehensive RSU Installation Strategy for Cost-Efficient VANET Deployment," *IEEE Transactions on Vehicular Technology (TVT)*, vol. 66, issue 5, pp. 4200-4211, May 2017
- Donghyun Kim, **Yesenia Velasco**, Zishen Yang, Wei Wang, Rasheed Hussain, and R.N. Uma, "Cost Effective Mobile and Static Road Side Unit Deployment for Vehicular Adhoc Networks," *Proceedings of International Workshop on Computing, Networking and Communications (CNC)* in conjunction with *International Conference on Computing, Networking and Communications (ICNC 2016)*, February 15-18, 2016, Kauai, Hawaii, USA.

Presentations

- LatinX panel speaker, Duke University's LatinX, November 17, 2016.
- Cost Effective Mobile Static Road Side Unit Deployment for Vehicular Adhoc Networks," *International Workshop on Computing, Networking Communications (CNC)*, February 15-18, 2016, Kauai, Hawaii, USA.
- Cost Effective Mobile Static Road Side Unit Deployment for Vehicular Adhoc Networks, 2015 Graduate Undergraduate Research Symposium (GURS), North Carolina State University, April 11, 2015.

Awards

- CRA-W Scholarship. Washington, D.C 2017

Funded my transportation, meals, stay, and ticket to the Computing Research Association of Women Conference.

- Recipient of Marjorie Lee Brown Award for Excellence in Mathematical Sciences, North Carolina Central University, 2016

Honor by the department of Mathematics awarded to a graduating student who has shown excellence in the mathematical sciences.

- Magna Cum Laude, North Carolina Central University, 2016

Earned by graduating students with a cumulative GPA of 3.5-3.79

- Graduate and Undergraduate Research Symposium (GURS), North Carolina Central University, 2015

Won first place presentation award in the Undergraduate, Natural Science category along with $50