

# Agustin Guerra

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## PROFESSIONAL PROFILE

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Highly motivated engineering professional with **5+** years of experience in the transportation industry. Committed to providing high-quality service focusing on innovation, safety, sustainability, operational performance, diversity, equity, and inclusion. Currently pursuing a PhD degree in Civil Engineering.

## EDUCATION

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<b>PhD candidate in Civil Engineering</b> <i>University of Florida, GPA: 3.66</i>	Aug. 2019 – Expected May 2023 <i>Gainesville, FL</i>
<b>MS in Civil Engineering</b> <i>University of Kansas, GPA: 3.89</i>	Aug. 2017 – May 2019 <i>Lawrence, KS</i>
<b>BS in Civil Engineering</b> <i>Universidad Tecnologica de Panama</i>	Mar. 2008 – May 2013 <i>Panama, PA</i>

## TECHNICAL SKILLS

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**Expertise:** Transportation Engineering, Statistical Analysis, Operation Research, Machine Learning  
**Languages:** Python (Proficient), R (Intermediate)  
**Software:** VISSIM, HCS, AutoCAD Civil 3D, Infracore, Slide-Rockscience  
**Developer Tools:** Github, Visual Studio  
**Libraries:** Pandas, NumPy, Matplotlib, CPLEX

## EXPERIENCE

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<b>Graduate Research Assistant</b> <i>University of Florida</i>	Aug. 2019 – Present <i>Gainesville, FL</i>
<ul style="list-style-type: none"><li>• Develop optimization algorithms in Python for arterials considering automated-vehicles capabilities</li><li>• Assist in the implementation of optimization algorithm for isolated intersections</li><li>• Facilitated the coordination of project activities to meet deadlines</li><li>• Explained traffic flow theory assignments to students</li></ul>	
<b>Highway &amp; Traffic Consultant</b> <i>WSP</i>	May 2019 – Aug. 2019 <i>Panama</i>
<ul style="list-style-type: none"><li>• Provided safety assessment for roadways, interchanges, and intersections</li><li>• Developed geometric design proposals</li><li>• Conducted earthwork estimation for highway projects</li></ul>	
<b>Highway Engineer</b> <i>Louis Berger</i>	Nov. 2012 – Aug. 2017 <i>Panama</i>
<ul style="list-style-type: none"><li>• Developed geometric designs for proposal and as-built drawings for highway projects. Project portfolio comprises several projects in the Latin American region (Panama, Colombia, Honduras, and Peru) adding up to \$3 billion in construction amount</li><li>• Coordinated with different departments (geotechnical, hydraulic, and pavement) to meet deadlines</li><li>• Created digital model terrain for highway projects</li><li>• Verified slope stability analysis using the Slide-Rockscience software</li><li>• Supervised and mentored drafter team with 4 people</li></ul>	

## LEADERSHIP/INVOLVEMENT

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<b>Volunteer at the Young Member Council, TRB:</b> Currently developing a website for the YMC - S&R	2022 – Present
<b>Co-founder of the IEEE-ITS Student Chapter:</b> Currently leading the efforts to establish an IEEE Student Chapter focused on ITS	2022 – Present
<b>ITE University Chapter Vice President:</b> Coordinated student seminars and <u>ITE</u> activities	2021 – 2022
<b>Student Representative at the UFTI Internal Steering Committee:</b> Promoted engagement activities between industry professionals and students	2020 – 2022
<b>Media Manager at KU Fulbright Student Association:</b> Led dissemination of activities promoted by the Fulbright Student Board, 2018	2018 – 2019

## FELLOWSHIPS & AWARDS

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<b>ITS Florida Anne Brewer Academic Scholarships:</b> Awarded by the ITS Florida Chapter	2022
<b>Fulbright Fellowship:</b> Awarded by the U.S Bureau of Educational and Cultural Affairs	2017
<b>Global Best Project:</b> Awarded by the ENR for the Coastal Beltway project in Panama	2015

## RELEVANT PROJECTS

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<b>4th Bridge over the Panama Canal</b>   <i>Panama</i>	2019
<ul style="list-style-type: none"><li>• Provided visibility and safety assessment for intersections and roadways</li><li>• Developed geometric design alternatives for interchanges</li><li>• Construction cost: \$1.2 billions</li></ul>	
<b>Corredor Panama Norte</b>   <i>Panama</i>	2016
<ul style="list-style-type: none"><li>• Played a major role in the coordination of the project</li><li>• Developed design drawings and calculations including 3D models of roadways, roundabouts, and interchanges</li><li>• Provided earthworks estimation</li></ul>	
<b>Perimetral Oriental de Bogota</b>   <i>Colombia</i>	2015
<ul style="list-style-type: none"><li>• Coordinated with other departments (geotechnical, hydraulic, surveying) to meet deadlines</li><li>• Developed design drawings and calculations including 3D models of roadways, intersections, and interchanges</li><li>• Trained and supervised drafter team</li><li>• Construction cost: \$428.0 millions</li></ul>	
<b>Panamerican Highway Widening Santiago -Vigui</b>   <i>Panama</i>	2014
<ul style="list-style-type: none"><li>• Provided design alternatives including 3D models and drawings for intersections</li><li>• Analyzed the slope stability of critical sections</li><li>• Construction cost: \$340.0 millions</li></ul>	
<b>Corredor Turistico La Barca – El Progreso – Tela</b>   <i>Honduras</i>	2014
<ul style="list-style-type: none"><li>• Conceived design drawings for roundabouts and urban sections including sidewalks, and bus-stops</li><li>• Provided traffic signs drawings using the MUTCD and local guidelines</li><li>• Construction cost: \$120.0 millions</li></ul>	
<b>Slope Stabilization Studies 53 km</b>   <i>Panama</i>	2014
<ul style="list-style-type: none"><li>• Interpreted the slope stability analysis results</li><li>• Examined ground improvement alternatives</li><li>• Construction cost: \$0.4 millions</li></ul>	
<b>Amador Causeway Widening</b>   <i>Panama</i>	2014
<ul style="list-style-type: none"><li>• Assisted with the geometric design of roundabouts</li><li>• Participated in the creation of the digital terrain model</li><li>• Assisted with the modeling of critical sections for embankments stability analysis</li><li>• Construction cost: \$95.0 millions</li></ul>	
<b>Coastal Beltway</b>   <i>Panama</i>	2012
<ul style="list-style-type: none"><li>• Developed design drawings for roadways including roundabouts, marine viaducts, and interchanges</li><li>• Construction cost: \$ 45 millions</li></ul>	

## PROFESSIONAL SOCIETIES

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<u>IEEE</u> : Institute of Electrical and Electronics Engineers	2022 – Present
<u>ASCE</u> : American Society of Civil Engineers	2022 – Present
<u>ITE</u> : Institute of Transportation Engineers	2019 – Present

## REFERENCES

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<b>Lily Elefteriadou, PhD:</b> Barbara Goldsby Professor, University of Florida	elefter@ce.ufl.edu
<b>Aurora Izquierdo:</b> Civil Structural Engineer II, WSP	Aurora.Izquierdo@wsp.com
<b>Juliana Canas:</b> Senior Advisor, First Climate	juliana.canas-vanegas@firstclimate.com
<b>Julio Aysa:</b> Env./Social and Governance Lead Officer, IDB	jaysa71@yahoo.com.mx