Agustin Guerra

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Professional Profile

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 seeking job opportunities in Transportation Engineering.

Education

PhD candidate in Civil Engineering — Aug. 2019 – Expected May 2023
University of Florida — *Gainesville, FL*

MS in Civil Engineering — Aug. 2017 – May 2019
University of Kansas — *Lawrence, KS*

BS in Civil Engineering — Mar. 2008 – May 2013
Universidad Tecnologica de Panama — *Panama, PA*

Technical Skills

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

Experience

Graduate Research Assistant — Aug. 2019 – Present
University of Florida — *Gainesville, FL*

- Develop optimization algorithms in Python for arterials considering automated-vehicles capabilities
- Assist in the implementation of optimization algorithm for isolated intersections
- Facilitated the coordination of project activities to meet deadlines
- Explained traffic flow theory assignments to students

Highway & Traffic Consultant — May 2019 – Aug. 2019
WSP — *Panama*

- Provided safety assessment for roadways, interchanges, and intersections
- Developed geometric design proposals
- Conducted earthwork estimation for highway projects

Highway Engineer — Nov. 2012 – Aug. 2017
Louis Berger — *Panama*

- 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
- Coordinated with different departments (geotechnical, hydraulic, and pavement) to meet deadlines
- Created digital model terrain for highway projects
- Verified slope stability analysis using the Slide-Rockscience software
- Supervised and mentored drafter team with 4 people

Service & Awards

ITE University Chapter Vice President: Coordinated student seminars and ITE activities — 2021 – 2022

Student Representative at the Internal Steering Committee at UFTI: Promoted engagement activities between industry professionals and students — 2020 – 2022

ITS Florida Anne Brewer Academic Scholarships: Awarded by the ITS Florida Chapter — 2022

Fulbright Fellowship: Awarded by the U.S Bureau of Educational and Cultural Affairs — 2017

Global Best Project: Awarded by the ENR for the Coastal Beltway project in Panama — 2015

Relevant Projects

4th Bridge over the Panama Canal | *Panama* 2019

- Provided visibility and safety assessment for intersections and roadways
- Developed geometric design alternatives for interchanges
- Construction cost: $1.2 billions

Corredor Panama Norte | *Panama* 2016

- Played a major role in the coordination of the project
- Developed design drawings and calculations including 3D models of roadways, roundabouts, and interchanges
- Provided earthworks estimation

Perimetral Oriental de Bogota | *Colombia* 2015

- Coordinated with other departments (geotechnical, hydraulic, surveying) to meet deadlines
- Developed design drawings and calculations including 3D models of roadways, intersections, and interchanges
- Trained and supervised drafter team
- Construction cost: $428.0 millions

Panamerican Highway Widening Santiago -Vigui | *Panama* 2014

- Provided design alternatives including 3D models and drawings for intersections
- Analyzed the slope stability of critical sections
- Construction cost: $340.0 millions

Corredor Turistico La Barca – El Progreso – Tela | *Honduras* 2014

- Conceived design drawings for roundabouts and urban sections including sidewalks, and bus-stops
- Provided traffic signs drawings using the MUTCD and local guidelines
- Construction cost: $120.0 millions

Slope Stabilization Studies 53 km | *Panama* 2014

- Interpreted the slope stability analysis results
- Examined ground improvement alternatives
- Construction cost: $0.4 millions

Amador Causeway Widening | *Panama* 2014

- Assisted with the geometric design of roundabouts
- Participated in the creation of the digital terrain model
- Assisted with the modeling of critical sections for embankments stability analysis
- Construction cost: $95.0 millions

Coastal Beltway | *Panama* 2012

- Developed design drawings for roadways including roundabouts, marine viaducts, and interchanges
- Construction cost: $ 45 millions

Professional Societies

ASCE: American Society of Civil Engineers 2022 – Present
ITE: Institute of Transportation Engineers 2019 – Present

References

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