# 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 internship opportunities

### EDUCATION

University of Florida

Gainesville, FL

PhD candidate in Civil Engineering

Aug. 2019 - Expected May 2023

University of Kansas

Lawrence, KS

MS in Civil Engineering

Aug. 2017 - May 2019

Universidad Tecnologica de Panama

Panama, PA

BS in Civil Engineering

Mar. 2008 - May 2013

#### TECHNICAL SKILLS

Expertise: Transportation Engineering, Statistical Analysis, Operation Research, Machine Learning

Languages: Python, R

Softwares: 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

- Developed optimization algorithms for corridors considering automated-vehicles capabilities
- Assisted on the implementation of optimization algorithm for isolated intersections

### 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 achieve deadlines
- Developed digital model terrain for highway projects
- Assisted with slope stability analysis
- Supervised and trained drafter team (4 people)

#### 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

- 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

- Played a major role in the coordination of the project
- Coordinated with other departments (geotechnical, hydraulic, surveying) to achieve 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
- Assisted with the slope stability analysis by modeling 2D models of critical sections
- Construction cost: \$340.0 millions

### Corredor Turistico La Barca – El Progreso – Tela | Honduras

2014

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

# Slope Stabilization Studies 53 km | Panama

2014

- Assisted with the slope stability analysis
- Assisted with the study of 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

## Awards & Service

ITE Student Chapter VP: Coordinated student seminars and ITE activities

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

Fulbright Fellowship: Awarded by the U.S embassy to complete a Master's Degree at the University of Kansas

Global Best Project in Roads and Highways: Awarded by the ENR for the Coastal Beltway project in Panama

## References

Lily Elefteriadou, PhD: Barbara Goldsby Professor, University of Florida

Gabriel Borras: Country Manager, WSP

Juliana Canas: Senior Advisor, First Climate

Julio Aysa: Env./Social and Governance Lead Officer, IDB

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