MARCOS ORTIZ, PHD

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SUMMARY

I am a PhD Mathematician from the University of Iowa, with seven years of academic and research experience. My research interests include topology, and experimental mathematics. I am proficient in programming, machine learning, and data science. I love to explore technical questions and puzzles, and learn about new tools that can be applied to solving these problems. I am currently at a transition point in my career, seeking industry opportunities in data science, machine learning, or related fields.

SKILLS AND CERTIFICATIONS

Mathematics: Research, Topology, Contact Topology, Topological Data Analysis, Experimental Mathematics
Programming: python, R, SQL, C/C++, Mathematica, MATLAB, java, LaTeX
Python Libraries: numpy, pandas, matplotlib, seaborn, tensorflow, keras, scikit-learn, scipy
Certifications: Deeplearning.AI and Stanford University Machine Learning Specialization Certificate (Unsupervised Learning, Recommenders, Reinforcement Learning — Advanced Learning Algorithms — Supervised Machine Learning: Regression and Classification)

EXPERIENCE

Colorado Mesa University, Grand Junction, CO 2018 – present
Instructor of Mathematics

- Designed and implemented extensive inquiry based course materials for the Engineering Calculus sequence, as well as Linear Algebra, Differential Equations, and Discrete Mathematics.
- Adapted course material for remote learning in Precalculus, Calculus I, II, and III.
- Earned an overall score of 95% on student evaluations across all courses taught.
- Awarded the highest possible faculty performance rating, *Exceptional*, for the past 4 years in a row.

Grinnell College, Grinnell, IA 2015-2018
Visiting Assistant Professor

- Mentored advanced undergraduate summer research projects in topology and topological data analysis.
- Developed lectures, homework, exams, and student projects for Linear Algebra, Number Theory, Topology, and Abstract Algebra.

University of Iowa, Iowa City, IA 2009-2015
Graduate Fellow

- Conducted graduate research in topology, contact topology, and experimental mathematics
- Proved novel results in contact topology, establishing a classification of a mathematical phenomena under a broad set of hypotheses.
- Organized a graduate research group in topology, which drew speakers from a variety of fields, including contact topology, knot theory, and topological data analysis.

MACHINE LEARNING

Through coursework and certifications I have developed familiarity with many fundamental concepts and machine learning tools, including:

- Using popular machine learning libraries like NumPy, scikit-learn, Tensorflow, and keras
- Building and training supervised machine learning models for prediction and binary classification tasks, including linear regression and logistic regression
- Supervised learning (multiple linear regression, logistic regression, neural networks, and decision trees)
- Unsupervised learning (clustering, dimensionality reduction, recommender systems),
- Best practices for artificial intelligence and machine learning innovation (evaluating and tuning models, taking a data-centric approach to improving performance)

EDUCATION

PhD, Mathematics University of Iowa *Department of Mathematics* 2015
Graduate Certificate in College Teaching University of Iowa *Graduate College* 2014
Masters, Mathematics University of Iowa *Department of Mathematics* 2012
B.Sc., Mathematics State University of New York at Buffalo *Department of Mathematics* 2009
B.A., Psychology University of North Carolina at Wilmington *Department of Psychology* 2004