JOSEPH MATTHEW **INGENITO**

3670 S Lincoln St, Englewood, CO · (732) 473-8444
joseph.ingenito@du.edu · LinkedIn · GitHub

Second year Ph.D. student in Mathematics at the University of Denver with 3 years of industry experience developing a sophisticated Workforce Management Solution, specializing in Agile software development, back-end development and RESTful API services. Looking to gain an internship that uses Machine Learning algorithms to analyze and interpret large sets of data.

EXPERIENCE

SEP 2022 – PRESENT

GRADUATE TEACHING ASSISTANT, UNIVERSITY OF DENVER

- Hosted 10 weekly recitations each quarter for classes of 20 students, and on occasion gave substitute lectures if the teacher could not be present. Also held four office hours each week.
- Proctored and graded any quizzes, midterms and final exams.
- Classes such as Linear Algebra and ODEs required proficiency with Mathematical Modeling using Matlab in order to successfully answer any questions the students may have.

AUG 2018 – AUG 2021

FULL-STACK DEVELOPER, VISUAL COMPUTER SOLUTIONS

- Designed and implemented a scalable fuzzy string processing algorithm that links together the “appropriate” customers across a growing list of 36+ databases.
- Reworked a KIOSK punch in/out project to use a RESTful API service, minimizing the open ports to the database servers. Added a contactless mode in response to the COVID-19 pandemic.
- Reformed and maintained two legacy mobile app projects in Xamarin.Forms for both iOS and Android. Improved the RESTful API methods that provide data for the apps using traditional SQL as well as LINQ to SQL queries.
- Developed an auto-update tool for an application used by the call-takers, greatly reducing the amount of time spent installing updates. The tool was created in a way the supports easy implementation for future internal applications.

EDUCATION

JUNE 2023

MASTER OF SCIENCE, MATHEMATICS – UNIVERSITY OF DENVER

GPA 3.63. Courses taken: Standard graduate sequence, Mathematics of AI and Machine Learning Seminar, Coding Theory, Symbolic Dynamics, Representation Theory, Statistics with R.

MAY 2021

BACHELOR OF SCIENCE, MATHEMATICS – THE COLLEGE OF NEW JERSEY

Cum Laude. Department Honors Thesis Title: On the Second Order Kuramoto Model of Coupled Oscillators, advised by Dr. Matthew Mizuhara. Member of the Pi Mu Epsilon National Society of Mathematics. Relevant Courses: Real Analysis, ODEs/PDEs, Nonlinear Dynamics and Chaos, Abstract Algebra, Group Theory, Computational Mathematics, Intro to Programming with Java, Data Structures in C++, Discrete Structures, Statistical Inference and Probability.

MAY 2018

ASSOCIATE OF SCIENCE, ELECTRICAL ENGINEERING – BROOKDALE COMMUNITY COLLEGE

GPA 3.84. Student tutor for Mathematics and Physics. Relevant Courses: Intro to Programming with C++, Digital Design, Principles of Electrical Engineering (Circuits and Electronics), Engineering Graphics with CADD.

SKILLS

- Python – Scikit-Learn/Numpy/Pandas
- Mathematical Modeling (Matlab)
- Statistics with R
- App Development
- Relational Databases
- RESTful APIs

ACTIVITIES

ACADEMIC RESEARCH

- Simultaneous Diophantine Approximation via the ILLL algorithm (extension of LLL).
- Fractal Geometry and Complex Dimensions – Implemented an algorithm to draw images of any self-similar fractal string given a defining input of scaling gaps/ratios.
- Bifurcations in the Kuramoto Model with Inertia (Honors Thesis) – Created simulations of the Kuramoto Model using Matlab.

PRESENTATIONS AND INVITED TALKS

- Presented and won outstanding poster at the undergraduate poster session of the Joint Mathematics Meetings 2021.
- Gave an invited talk to the Fractals, Dynamics and Mathematical Physics Group Seminar at the University of California, Riverside.
- Virtual Poster Session for the Mentored Undergraduate Summer Experience at TCNJ.