

Tomás Ortega Rojas

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EDUCATION

New York University, Graduate School of Arts and Science, New York, NY May 2022
Master of Science in Computer and Information Sciences, GPA: 3.88/4.0
Relevant Coursework: Big Data Science, Deep Learning Systems, Artificial Intelligence

Florida International University, School of Computing and Information Sciences, Miami, FL May 2019
Bachelor of Science in Computer Science, GPA: 3.84/4.0
Relevant Coursework: Databases, Graph Theory, Linear Algebra

TECHNICAL SKILLS

Programming Languages: Proficient in Java, Python, C/C++, JavaScript and SQL — Familiar with Matlab and PHP
Libraries and Frameworks: Flask, Pandas, Numpy, Pytorch, Keras, Plotly, ScikitLearn, Hadoop, Spark
Tools: Bash, Git, VirtualBox, Docker, PostgreSQL, MongoDB, Amazon AWS, \LaTeX

PROJECTS

Texture Synthesis GAN (Python, PyTorch, Jupyter Notebooks) Sep 2021 - Dec 2021
Generative Adversarial Network (GAN), trained to generate different regular textures that can be used in 3D models.
– Improved the performance of the original model to achieve better textures by using data augmentation

Ray Tracer (C++, Eigen) Aug 2021 - Dec 2021
Application for rendering 3D meshes and primitive objects such as spheres and rectangles using ray tracing
– Implemented the ray tracing algorithm from scratch using c++ and Eigen (library for linear algebra).
– Applied an optimization algorithm called AABB Trees to accelerate the rendering of 3D triangle meshes. This dramatically improved the rendering speed for large 3D meshes

Phishing Website Detection (Python, Scikit-Learn, Web Crawling) Jan 2021 - June 2021
Command Line Application that determines if a website is malicious or not using machine learning.
– Created a web crawler using python to extract information from a collection of 100,000 websites.
– Trained machine learning algorithms for classifying websites as malicious or legitimate, achieving an accuracy of 95%

Data Science Workflow Manager (Python, Plotly, Flask) Jan 2019 - May 2019
Web application for building and automating data science pipelines.
– Designed and Implemented the UX/UI using HTML, CSS and, JS along Plotly for data visualizations.
– Collaborated with a team of graduate students and developed tools to automate data cleaning, passing data to models and visualizing the results.

GeekText (ReactJS, JavaScript, Flask) January 2017 - April 2017
Web application where users can browse, and purchase books.
– Developed an API using python and Flask to process the product information and get data from the database.
– Created a React component for displaying information about a selected book along with its rating, and comments.
– Collaborated in a team of 5 and applied software engineering principles along with the scrum agile methodology to complete the project.

EXPERIENCE

Freelancing & Volunteering Jun 2020 - Present
New York City, New York, NY
– Worked directly with clients documenting requirements, and developing websites for e-commerce and blogging.

Web Developer Intern Aug 2019 - Jun 2020
GBP Solutions, Miami, FL
– Implemented web scrapers using Python, BeautifulSoup and Selenium to get real estate data from multiple sources.
– Worked on a web application using Python, Flask, and PostgreSQL for statistical analysis of real state data.
– Developed application to find properties with similar characteristics in a specific geographic location within a specified radius using PostGIS.

Programming I and II Tutor Aug 2018 - Dec 2018
Florida International University, Miami, FL
– Analyzed and debugged code with students to provide feedback.
– Applied strong communication skills and problem-solving techniques working with students through programming exercises.