

# John Corio

973-896-6625 | corioj@umich.edu | corioj.github.io | linkedin.com/in/john-corio-63b128196/

## EXPERIENCE

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### Data Scientist

Mar 2022 – Jun 2023

*IBM*

*New York, NY*

- Developed machine learning assets using Python, Scala, Java, and SQL, open-source libraries (scikit-learn, Tensorflow, Pandas, Apache Spark, etc.), and proprietary software frameworks to address individual business use cases and increase software sales.
- Gathered project requirements with client, performed data exploration and processing, and lead implementation of regression models in Scala and Java using Apache Spark to transition a major banking client's overdraft system that mediates millions of commercial and personal transactions per day from rule-based architecture to AI.
- Created NLP assets for a banking client that perform document sectioning, entity extraction, and section classification on PDF and Word documents using deep-learning and rule-based algorithms in Python Jupyter notebooks, via open-source text processing libraries and proprietary machine learning libraries.
- Completed multiple client MVPs to help achieve the most successful quarter for software sales in IBM Financial Services Market history.

### Data Quality Assurance Analyst

Jun 2021 – Feb 2022

*ImageCare Centers*

*Newton, NJ*

- Drafted first designs of a proprietary SQL database specifically for analytics, migrated large datasets from a third-party software vendor, and wrote SQL test queries to verify data quality
- Created SQL queries, tables, and views to pull and evaluate data used in analytics informing on key KPIs.

### Japanese Language Student

Jul 2023 – Mar 2024

*ISI Language School*

*Tokyo, JP*

- Studied Japanese in upper level language classes at ISI Takadanobaba in preparation for the JLPT N2 exam.

## PROJECTS

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### Album Art Generator | *Python, PyTorch, OpenCV, Matplotlib, Pillow, SpotiPy*

- Implemented 3 different generative adversarial neural networks based on computer vision research publications and individual design to generate album covers displaying aesthetics of various genres
- Implemented a data processing, labeling, and splitting routine using Pillow and OpenCV to produce a cleaned dataset of over 150,000 images.
- Wrote Python scripts to query and extract images and desired metadata from JSON objects stored on the Spotify developer API via the SpotiPy library.

### Yelp Review Classifier | *Python, scikit-learn, Matplotlib, Pandas, NLTK*

- Achieved top 10 percent in class on testing dataset accuracy for an NLP-based classification model of the emotional modality of Yelp reviews in Python using Jupyter notebooks
- Created an automated framework for training and optimizing hyperparameters, evaluating and comparing support vector machines and deep learning models, and reviewing validation set accuracy results.

### Nocturne: Videogame | *C#, Unity Engine*

- An original point-and-click and 3D game made using C# in Unity Engine in collaboration with another developer.
- Designed and implemented item and inventory systems, an item combination system, interactions between items and the environment and NPCs, in-game puzzles, and game management systems.
- Tracked development and task management via Notion, source control via GitHub, and published to itch.io.

## EDUCATION

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### University of Michigan

Ann Arbor, MI

*Bachelor of Sciences in Data Science, Minor in Mathematics*

*Aug 2017 – May 2021*

## TECHNICAL SKILLS

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**Languages:** Python, C#, C++, Scala, Java, SQL, R, JavaScript

**Libraries:** Apache Spark, scikit-learn, PyTorch, Tensorflow, CUDA, Pandas, NumPy, Matplotlib, C++ STL

**Developer Tools:** Git, Xcode, Visual Studio, VS Code, Jupyter Notebooks, CMake, Google Colab, IntelliJ