John Corio

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

Experience

Game Developer Mar 2025 –
Toontown: Corporate Clash *Remote*

- Using Python's Panda3D, Astron, and Git to implement live features in a fan-run MMORPG serving thousands of players worldwide.
- Designing, implementing, and refactoring code for systems involving gameplay mechanics, account management, networking, distributed systems, and more.

Data Scientist Mar 2022 – Feb 2024
IBM *New York, NY*

- Developed machine learning assets using Python, Scala, C++, SQL, open-source libraries (scikit-learn, Tensorflow, Pandas, Apache Spark, etc.), and proprietary software to address individual business use cases and increase client adoption, helping achieve the most successful software sales quarter in IBM Financial Services Market history.
- Gathered project requirements with client, performed data exploration and processing, and lead implementation of regression models in Scala, Python, and Java using Apache Spark MLLib 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.
- Co-authored NLP assets that performs 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.

Data Analyst Jun 2021 – Feb 2022
ImageCare Centers *Newton, NJ*

- Drafted first designs of a proprietary SQL database for analytics, migrated large datasets from a third-party software vendor, and wrote SQL queries, tables, and views to analyze data informing on key KPIs.

Technical Skills

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
Certifications: JLPT N2 145/180

Projects

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

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

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.

Tsuneflip | *C#, Unity Engine, Ableton Live 11*

- 3D arcade-style game jam submission made in one week, under theme 'inside out.'
- Designed and implemented grid and game management systems, a basic level editor, tile and grid system, data exchange systems between menus and levels, game control systems, input handling, movement.
- Currently working on an update including individual enemies, a globally connected leaderboard, greater variety in levels and worlds, configurable player preferences, Japanese language support, power-ups, and more.

Education

University of Michigan Ann Arbor, MI

Bachelor of Sciences in Data Science, Minor in Mathematics *Aug 2017 – May 2021*