John Corio

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EXPERIENCE

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 client adoption, helping to achieve the most successful quarter for software sales 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 for a banking client 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 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 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. Currently possess JLPT N2 certification.

PROJECTS

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

- 3D arcade-style game jam submission made in one week under the theme 'inside out,' placing in top 25.
- 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.
- Tracked development and task management via Notion, source control via GitHub, and published to itch.io.

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

- An original point-and-click and 3D puzzle-explorer game made 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.
- Developed plot, collaborated on art direction, and composed original songs and sound effects, tracked development and task management via Notion, source control via GitHub, and published to itch.io.

Raytracing Renderer | *C++, STL*

- Implemented a raytracing renderer that supports spheres and quad shapes, texturing of objects using noise and UV image mappings, different materials such as volumetrics and dielectrics, light-emitting surfaces, bounding volume hierarchical optimization using AABB bounding boxes, and object rotations and translations via instancing.
- Camera placement configurable via rotation and translation, output images configurable via adjustments to per-pixel sampling, ray bounce recursion depth, FOV, disk defocus, and aspect ratio.

EDUCATION

University of Michigan Ann Arbor, MI

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

TECHNICAL SKILLS

Languages: C++, C#, Python, SQL, JavaScript, HTML/CSS
Libraries & Software: Unity Engine, C++ STL, C# .NET, OpenGL, GLSL, HLSL, Ableton, Logic Pro
Developer Tools: Git, Xcode, Visual Studio, VS Code, Jupyter Notebooks, CMake, Google Colab, IntelliJ