David Corcoran

703-674-8110 | dc1524@georgetown.edu | Washington D.C
https://www.linkedin.com/in/david-corcoran-70677917a/ | https://corcoran.georgetown.domains/Homepage/index.html

EDUCATION

Georgetown University May 2026
Master of Science in Data Science and Analytics GPA: 3.90

Virginia Tech May 2022
Bachelor of Science in Business Information Technology - *Computer Decision Support Systems Major* GPA: 3.77
Bachelor of Science in Finance - *Investment Management and Chartered Financial Analyst Major*
Economics Minor

WORK EXPERIENCE

Federal Technology Risk Management Associate | *KPMG* July 2022 – July 2024

- Earned DoD Secret Clearance to support sensitive government projects
- Contributed to the development of a strategy document for a government agency, guiding implementation of Segregation of Duties (SoD), Identity & Access Management (ICAM), Zero Trust, Least Privilege, and Emergency Access Management protocols.
- Designed and executed Tests of Design (ToDs) and Tests of Effectiveness (ToEs) to assess warehouse SAP IT controls.
- Conducted on-site visits across the U.S., collaborating with clients to document and evaluate warehouse IT controls and identify control gaps for a government IT system audit readiness initiative.
- Authored a Corrective Action Plan including process documentation, risk and control matrix, control gap analysis, and responsibility-accountability matrix to address identified IT process deficiencies.
- Supported the development of a program governance charter, conducted a current-state SoD/ICAM assessment, and created a Microsoft Power BI dashboard to facilitate the enterprise-wide ICAM implementation.
- Led monthly status and bi-weekly activity reports, ensuring timely and effective communication of progress and deliverables to stakeholders.

PROJECTS

Vehicle Collision Neural Network Classification Models, Neural Networks and Deep Learning (DSAN 6600)

- Processed over 60,000 image frames extracted from 1,500 annotated dashcam videos, utilizing YOLOv8 to obtain object-level spatial features.
- Created LSTM, GRU, and Transformer-based sequence models to classify vehicle collisions from real-world dashcam footage into no collision/collision categories based on temporal patterns in object features.
- Achieved the highest performance using a GRU-based architecture, with 68% accuracy and a 69% F1 score, highlighting the ability for recurrent neural network models to effectively learn temporal patterns from raw video sequences and object-level features

Data-Driven Analysis of Success Factors in the Film Industry, Data Science and Analytics (DSAN 5000)

- Extracted a dataset of 1,700 movies and 23 attributes using TMDB and OMDB APIs.
- Applied K-Means, DBSCAN, and Hierarchical clustering to analyze genre trends and financial performance.
- Utilized PCA and t-SNE for dimensionality reduction and visualization of high-dimensional movie datasets.
- Developed random forest and linear regression models to predict movie performance and explained 65.7% of revenue variability and 30% of Oscar win variability.
- Classified movie plots using Naive Bayes and TF-IDF for genre classification, resulting in 90% accuracy for binary classification.

Predictive Modeling of Chronic Absenteeism in U.S. School Districts, Statistical Learning (DSAN 5300)

- Collected and preprocessed data from approximately 12,800 U.S. school districts, integrating demographic, academic, and financial indicators to model chronic absenteeism.
- Developed and evaluated multiple classification models (Neural Networks, Random Forests, Logistic Regression, LDA/QDA, SVMs) to predict absenteeism risk and classify districts into binary and multi-class categories.
- Achieved best binary classification performance using a Neural Network (Accuracy: 73.05%, F1 Score: 0.61, AUC: 0.815) after applying a hyperparameter tuning process to optimize model architecture.

SKILLS

Programming: Python, R, SQL, JavaScript, HTML, CSS, PHP, VBA, VB.NET, Selenium, Bootstrap
Data Analysis & Visualization: Pandas, NumPy, SciPy, Matplotlib, Seaborn, Plotly, Microsoft Power BI, Tableau, Simio
Machine Learning: scikit-learn, PyTorch, Keras, TensorFlow
Miscellaneous: Microsoft Access, Quarto, Jupyter Notebooks, Github, Git

HONORS

KPMG Culture Catalyst and Mentor April 2024
KPMG Health Equity Hackathon – 3rd Place March 2023