

# Andrew Clark

Richmond, VA  
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423-504-5024

## Experience

- Data Economist  
Block Science  
December 2018 – present  
Richmond, VA
- > Research and Development around blockchain implementations
- Principal, Machine Learning Audit  
Capital One Financial Corporation  
September 2017 – November 2018  
Richmond, VA
- > Build machine learning and continuous auditing applications to reinvent the audit process utilizing Python, SQL and AWS.
  - > Establish approaches for auditing and validating machine learning algorithms leveraging OCC 2011-12 and existing guidance along with original research
  - > Create and present trainings on machine learning
  - > Perform machine learning algorithm audits
- IT Auditor / Data Scientist  
Astec Industries, Inc.  
May 2015 – September 2017  
Chattanooga, TN
- > Designed and built a continuous auditing infrastructure over Astec's numerous global subsidiaries using SQL and Python.
  - > Developed custom analytic scripts for corruption/compliance and anomalous journal entry testing using SQL, Python, pandas, and scikit-learn.
  - > Researched the application of statistical and machine learning methods for use in the auditing domain. An example of which is the development and deployment of an unsupervised clustering algorithm across the full population of journal entries.
  - > Conducted security audits across Astec Industries' subsidiaries focusing on SQL Server, Windows Server, and Active Directory best practices.
  - > Created cybersecurity audit framework targeting company and industry-specific risks based off of NIST's Cybersecurity framework and the Center for Internet Security's Critical Security Controls.

## Certifications

- > Certified Analytics Professional - INFORMS - February 1, 2018
- > Certified Graduate Statistician - ASA - January 5, 2018 - December 31, 2025
- > AWS Certified Solutions Architect - Associate - April 2, 2018 - April 2, 2020

## Education

- University of Reading  
September 2018 - May 2022 expected  
*PhD in Economics*
- > Proposed dissertation: "International Reserve Currency Shifts: a historical, data driven approach."
- Southern Methodist University  
August 2017  
*Master of Science in Data Science*
- > Coursework in statistics, machine learning, databases, and visualization utilizing Python, SQL, R, and SAS.
- University of Tennessee at Chattanooga  
May 2015  
*Bachelor of Science in Business Administration with a concentration in Accounting*
- > Summa Cum Laude
  - > Course work in Intermediate Microeconomics and Macroeconomics
- Beta Alpha Psi, Beta Gamma Sigma

## Publications and Presentations - Highlights

*The Machine Learning Audit - CRISP-DM Framework*  
ISACA Journal, Volume 1, 2018

*Keynote: The Machine Learning Audit*  
December 1, MIS Training Institute ITAC 2017