

## **ACADEMIC CURRICULUM VITAE**

### **Scott Allen Mongeau Cybersecurity Data Scientist**

MA MA GD MBA PhD (abd)  
INFORMS CAP & ORSociety CSci  
Owner / Principal Data Scientist, SARK7 BV



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- CSDS portfolio [sark7.com/csds](http://sark7.com/csds)
- Publications [nyenrode.academia.edu/ScottMongeau](http://nyenrode.academia.edu/ScottMongeau)
- LinkedIn [www.linkedin.com/in/smongeau](http://www.linkedin.com/in/smongeau)
- Blog [www.sctr7.com](http://www.sctr7.com)
- Twitter [twitter.com/sark7](http://twitter.com/sark7)

## **RESUME SUMMARY**

Scott Allen Mongeau (1971) is a Principal Cybersecurity Data Scientist at SARK7 BV based in Leiden, Netherlands. He is an INFORMS Certified Analytics Professional (2015) and an OR Society Chartered Scientist (CSci).

Scott has more than three decades of experience designing and deploying analytics-intensive solutions in a range of industries, including management consulting (Deloitte and own firm SARK7), financial services, IT, biopharmaceuticals, advanced materials, and start-ups.

Having maintained a strong involvement with academia and teaching throughout his technical career, including being an active part-time student for the past 15 years, Scott is currently seeking opportunities at a technical university to pursue full-time teaching and research in the area of cybersecurity data science.

## **ACADEMIC RECORD**

2011 - 2020

PHD (ABD), NYENRODE BUSINESS UNIVERSITY

- Dissertation currently undergoing defense '[Cybersecurity Data Science: Best Practices in an Emerging Profession](#)'
- Dissertation will be published in the fall of 2020 by Springer (Mongeau, 2020)

2009 – 2011

MBA, ERASMUS ROTTERDAM SCHOOL OF MANAGEMENT (RSM)

- Global Executive OneMBA - Dean's Honor

2008 - 2009

MA, ERASMUS ROTTERDAM SCHOOL OF MANAGEMENT (RSM)

- Financial Management
- Quantitative analytics and risk management focus

1995

Graduate Diploma (GD), ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY (RMIT)

- Management of Information Systems - Honors
- Rotary International Ambassadorial Scholar

1993 - 1994

MA, UNIVERSITY OF TEXAS - AUSTIN

- Communication & Digital Technology (internet focus) - Honors

1989 - 1993

BPHIL, MIAMI UNIVERSITY OF OHIO

- Communication & Computer Technology - Honors / Scholar-Leader Program
- Glasgow University – study year abroad

## **RESEARCH INTERESTS**

Scott's research interests are focused on the application of data science methods to monitoring and assuring digital networks and devices. Taking a management of information systems (MIS) perspective, he combines technical, process (methodological), and organizational perspectives.

Scott's recently submitted doctoral dissertation, '[Cybersecurity Data Science \(CSDS\): Best Practices in an Emerging Profession](#)' (Mongeau, 2020), provides a foundation for a number of follow-on research initiatives:

- Cyborg (human-in-the-loop) process orchestration in cybersecurity triage, investigation, and remediation
- Design science research on cybersecurity human-in-the-loop and online machine learning (self-reinforcing learning) solutions
- Application of semantic engineering to cybersecurity incident detection and remediation automation through machine-driven symbolic reasoning (Riley, 2019; Sikos, 2018; Sikos et al., 2018)
- Combined network graph analytics (Akoglu, Tong, & Koutra, 2015; Barabási, 2014; Harley, Purdy, Limiero, Lu, & Mathews, 2018) and process analytics (van der Aalst, 2016) for refined cybersecurity anomaly detection
- Best practices research into cybersecurity data cleaning and preparation methods
- Implementation assessments of focused methods for CSDS, particularly network graph analytics, natural language processing, time-series analysis, process mining / analytics, and deep learning
- Literature and implementation research into the application of security-adjacent domain principles and practices to CSDS, particularly fraud analytics, epidemiology / medical diagnostics, quantitative risk management, and social science research methods
- Deriving and advocating a CSDS-specific analytics process model (e.g. CRISP-DM for CSDS)
- Application of text analytics to cybersecurity data (i.e. semi-structured pattern discovery in log files)

## **TEACHING**

For the past decade, Scott has been active developing and delivering academic classes and lectures, corporate training, workshops, and online e-learning offerings focused on the topics of data science, data analytic, big data, and cybersecurity data science.

2015 – 2020

Nyenrode Business Universiteit

Big Data en Business AI

➤ [nyenrode.nl/opleidingen/p/collegreeks-big-data](https://nyenrode.nl/opleidingen/p/collegreeks-big-data)

2015 – 2020

SAS Institute

Training Class: Data Science for Cybersecurity Professionals

2013 - 2020

Erasmus Rotterdam School of Management (RSM)

Alumni lecturer on data science, analytics, and big data

2013 – 2015

Deloitte

Internal mentoring and training of Deloitte analytics consultants

2013 – 2014

Accenture Academy

E-learning courses on business analytics

➤ [sctr7.com/2014/07/14/business-analytics-e-learning-courses-from-sark7/](https://sctr7.com/2014/07/14/business-analytics-e-learning-courses-from-sark7/)

2011 – 2013

Nyenrode New Business School, Amsterdam

Lecturer on Statistics and Economics

2011 – 2012

DSM

Training on innovation portfolio management and financial analytics

## **ONLINE LECTURES AND PRESENTATIONS**

Cybersecurity Data Science - May 2019

Slides: [CYBER\\_00\\_Overview.pdf](#)

[CYBER\\_01\\_Frame.pdf](#)

[CYBER\\_02\\_Data.pdf](#)

[CYBER\\_03\\_Discover.pdf](#)

[CYBER\\_04\\_Detect.pdf](#)

[CYBER\\_05\\_Deploy.pdf](#)

Erasmus RSM – Introduction on Cognitive Analysis - April 29, 2015

Overview: <https://sctr7.com/2015/04/29/cognitive-analytics-practitioner-perspectives/>

YouTube: [An introduction on Cognitive Analytics, a lecture by Scott Mongeau – Deloitte](#)

Erasmus RSM – Introduction to Business Analytics - May 19, 2014

Overview: <https://sctr7.com/2014/05/19/introduction-to-business-analytics/>

YouTube: [Introduction to Business Analytics – Part 1 of 4](#)

[Introduction to Business Analytics – Part 2 of 4](#)

[Introduction to Business Analytics – Part 3 of 4](#)

[Introduction to Business Analytics – Part 4 of 4](#)

December 12, 2013

TedX RSM – Data Science and Our Magical Minds

Overview: <https://sctr7.com/2013/12/15/tedx-data-science-and-our-magical-minds/>

YouTube: [Data Science and Our Magical Minds](#)

## **CONFERENCE PRESENTATIONS**

As a frequent presenter at professional, industry, and academic conferences, below are a selection of presentations Scott has given on topics related to cybersecurity data science.

[FloCon 2020](#), Conference: Savannah, GA, U.S.

Mongeau, S. A. (Presenter). (2020b, January 9, 2020). FloCon 2020: Cybersecurity Data Science (CSDS): Best Practices in an Emerging Profession. 2020 FloCon Conference - Savannah, GA. Retrieved from [http://www.sark7.com/docs/CSDS\\_FloCon\\_2020.01.09.pdf](http://www.sark7.com/docs/CSDS_FloCon_2020.01.09.pdf)

[INFORMS Conference on Security](#), Conference: Monterey, CA, U.S.

Mongeau, S. A. (Presenter). (2020c, February 11, 2020). INFORMS Security Conference 2020: Cybersecurity Data Science (CSDS): Best Practices in an Emerging Profession. 2020 INFORMS Security Conference. Retrieved from [http://www.sark7.com/docs/CSDS\\_INFORMS\\_Security\\_Conference\\_2020.02.11.pdf](http://www.sark7.com/docs/CSDS_INFORMS_Security_Conference_2020.02.11.pdf)

[Siemens PLM Europe 2019](#), Conference: Berlin, Germany

Mongeau, S. A. (Presenter). (2019c, October 9, 2019). Siemens PLM Europe Conference 2019: Teamcenter Security Monitoring through SAS Analytics. Siemens PLM Europe Conference 2019. Retrieved from [http://www.sark7.com/docs/CSDS\\_INFORMS\\_Security\\_Conference\\_2020.02.11.pdf](http://www.sark7.com/docs/CSDS_INFORMS_Security_Conference_2020.02.11.pdf)

[RSA 2019](#), Conference: San Francisco, CA, U.S.

Mongeau, S. A. (Presenter). (2019b, March 6, 2019). RSA 2019: There's No Intelligence in AI Without Security Data Management. RSA Conference 2019. Retrieved from [http://www.sark7.com/docs/CSDS\\_RSA-Data\\_Cybersecurity\\_2019.03.06.pdf](http://www.sark7.com/docs/CSDS_RSA-Data_Cybersecurity_2019.03.06.pdf)

#### PRMIA 2017, Webinar

Mongeau, S. A. (Presenter). (2019a, June 22, 2017). PRMIA Webinar: Data Science For Cybersecurity Risk. PRMIA Webinar. Retrieved from [http://www.sark7.com/docs/CSDS\\_Conf\\_PRMIA\\_Risk\\_2017.06.22.pdf](http://www.sark7.com/docs/CSDS_Conf_PRMIA_Risk_2017.06.22.pdf)

#### GARP 2017, Conference: Amsterdam, Netherlands

Mongeau, S. A. (Producer). (2017, February 2, 2017). GARP: Data Science For Cybersecurity Risk: Measurement, Methods, and Models. GARP. Retrieved from [http://www.sark7.com/docs/CSDS\\_GARP\\_Cyber\\_Risk\\_2017.02.02.pdf](http://www.sark7.com/docs/CSDS_GARP_Cyber_Risk_2017.02.02.pdf)

#### ICS2 2015, Conference: Amsterdam, Netherlands

Mongeau, S. A. (Producer). (2015, May 19, 2015). ICS2: Maximum Overdrive: Reframing Cyber Risk. ICS2. Retrieved from [http://www.sark7.com/docs/CSDS\\_Conf\\_ICS2\\_Cyber\\_Analytics\\_2015.05.19.pdf](http://www.sark7.com/docs/CSDS_Conf_ICS2_Cyber_Analytics_2015.05.19.pdf)

#### ACFE 2014, Conference: Amsterdam, Netherlands

Mongeau, S. A. (Presenter). (2014, March 24th, 2014). Continuous Fraud Monitoring and Detection via Advanced Analytics: State-of-the-Art Trends and Directions. 2014 Association of Certified Fraud Examiners (ACFE) European Conference (Amsterdam, Netherlands). Retrieved from [http://www.sark7.com/docs/CSDS\\_Conf\\_ACFE\\_2014.03.pdf](http://www.sark7.com/docs/CSDS_Conf_ACFE_2014.03.pdf)

## **INDUSTRY WHITEPAPERS**

In his industry roles over the last decade, Scott has produced a number of industry and technical position papers and posts. These are informative promotional offerings often backed by technical products and/or services which he has designed. Below is a selection of several representative whitepapers in the CSDS area.

Mongeau, S. A. (2019). Cybersecurity Research Datasets. Retrieved from <https://sctr7.com/2019/11/18/cybersecurity-research-datasets/>

Mongeau, S. A. (2018). Cybersecurity Data Science (CSDS): How Not to Drown in Your Cyber Data Lake. Retrieved from <https://www.linkedin.com/pulse/cybersecurity-data-science-csds-how-drown-your-cyber-lake-mongeau%2F/>

Mongeau, S. A. (2019). What is Cybersecurity Data Science? Retrieved from <https://www.linkedin.com/pulse/what-cybersecurity-data-science-scott-allen-mongeau/>

Mongeau, S. A. (2020). Cybersecurity Data Science (CSDS) Corpus. Retrieved from <https://www.linkedin.com/pulse/cybersecurity-data-science-csds-corpus-scott-allen-mongeau/>

Mongeau, S. A. (2017). Cybersecurity Data Science: Adopting a New Paradigm. Retrieved from <https://www.linkedin.com/pulse/cybersecurity-data-science-adopting-medical-paradigm-mongeau/>

Mongeau, S. A. (2014). Emerging Trends in Data Analytics. Retrieved from <https://sctr7.com/2014/07/09/twelve-emerging-trends-in-data-analytics-part-1-of-4/>

## **CURRENT PROFESSIONAL ROLE**

10/2008 – PRESENT

PRINCIPAL DATA SCIENTIST / OWNER

SARK7 BV

- Owner / consultant delivering full-lifecycle data science solutions
- Facilitating data science organizational strategy, machine learning modeling, decision processes, predictive analytics, and optimization solutions
- Teaching / training on data science, analytics, machine learning, data engineering
- Clients include Accenture, DSM, Genentech, Nyenrode, start-up

## **PAST PROFESSIONAL ROLES**

9/2015 – 6/2020

PRINCIPAL BUSINESS SOLUTIONS MANAGER - CYBERSECURITY DATA SCIENTIST

SAS INSTITUTE

- Designs, promotes, and deploys CSDS solutions for global clients
- Activities range from deep-technical (programming, systems design, data management, statistics, machine learning) to organizational (technical project management, presenting, teaching, and leadership)
- conducts continual research on methods to detect network and device incursions utilizing statistical, analytical, and machine learning methods

9/2013 – 8/2015

ANALYTICS MANAGER – FRAUD/FINANCIAL CRIME/CYBER

DELOITTE

- Data analytics solutions design, development, and deployment for global clients
- Driving analytics lifecycle through technical project management and mentoring
- Coordinating and communicating at multiple levels from executive to technical experts

10/2008 – 8/2013

PRINCIPAL ANALYTICS CONSULTANT

SARK7

- Lead consultant delivering full-lifecycle data analytics solutions
- Strategy, modeling, decision processes, predictive analytics, optimization, and simulations
- Clients included: Accenture, DSM, Genentech, Nyenrode, Batavia Biosciences, start-ups
- 10/2000 – 5/2008

PRINCIPAL FINANCIAL ANALYST

GENENTECH / ROCHE

- Range of data analytics and BI focused project-based roles during heavy growth phase
- 2005 – 2008: Principal Financial Analyst – Corporate Finance
- 2003 – 2005: Principal Business Analytics Enterprise Architect – Corporate IT
- 2000 – 2003: Senior Manager Web Analytics / BI – Corporate IT

1/1999 – 7/2000

SENIOR R&D SYSTEMS ENGINEER, ATRADIUS

- Managed design and team of consultants to push key legacy insurance product to web
- Facing technical role with executive management, internal users, and customers

9/1996 – 10/1998

CIO, CFSI / PRECISION RECOVERY ANALYTICS

- Designed, deployed, and managed systems to control \$350 million in credit receivables
- Implemented end-to-end IT infrastructure in zero-tolerance start-up environment
- Accountable to board for technology and information management strategy

## **PROFESSIONAL CERTIFICATES**

2020 CHARTERED SCIENTIST (CSCI)

SCIENCE COUNCIL

2015 CERTIFIED ANALYTICS PROFESSIONAL (CAP)

INFORMS

2004 – 2008 FINANCE CERTIFICATE

UNIVERSITY OF CALIFORNIA BERKELEY EXTENSION

## **LIST OF PUBLICATIONS**

- [ACADEMIA.EDU LISTING OF PUBLICATIONS](#)

Mongeau, S. A. (2020). Cybersecurity Data Science: Best Practices in an Emerging Profession. Springer Security. Unpublished dissertation. Nyenrode Business Universiteit.

[http://www.sark7.com/CSDS\\_Mongeau.pdf](http://www.sark7.com/CSDS_Mongeau.pdf)

Mongeau, S. A. (2012). Architecting the Evidence-Based Firm: Assessing Organizational Decision Fitness via Social Network Analysis. Paper presented at the Bridging theory and Practice: 2nd International PhD Conference PhD Program School of Management, Breukelen, The Netherlands.

Mongeau, S. A. (2009). Decision Support via Real Options Analysis: Financial Products / Services Analysis (FPSA). (Masters of Financial Management (MFM)). Erasmus Rotterdam School of Management (RSM), Rotterdam, Netherlands. Retrieved from

[http://www.sark7.com/docs/sark7-scott\\_mongeau-rsm\\_mfm.pdf](http://www.sark7.com/docs/sark7-scott_mongeau-rsm_mfm.pdf)

## **TECHNICAL SKILLS**

- **Programming:** C, Java, Javascript, PERL, Python, R, SAS, Visual Basic / VB.Net
- **Data management:** DB design, SQL, NOSQL, graph databases, regular expressions, ETL

- **Big data:** AWS, Hadoop, Spark, Hive
- **Statistical analysis:** JMP, SPSS, Matlab, Statistics: inferential / multivariate, epidemiology, time series, econometrics
- **Machine learning:** unsupervised, semisupervised, supervised, deep learning, reinforcement
- **Specialized methods:** deep learning, graph analytics, process analytics, simulation, text analytics / NLP, fraud and cyber analytics, financial and risk analytics, customer analytics, semantic engineering