

# Joseph Warren Clark

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## Summary

Software developer, web developer, database expert, and data scientist with broad and deep experience (many technologies over many years) and a PhD in information systems.

CompTIA Security+ certified. Holder of a "Secret" security clearance.

## Education

- 2012 PhD in Information Systems, USC
- 2004 MBA, Tulane University
- 1999 BA in Communication, USC

## Work Experience

- 2021- Senior Java Engineer, Adsync Technologies (Contractor for U.S. Navy)
- 2019-2021 Senior Programmer Analyst, State of Maine Office of Information Technology
- 2016-2019 Lecturer in Management Information Systems, University of Maine
- 2016-2019 Python/SQL/Javascript/Angular Analytics Developer, Lie-Nielsen Toolworks (1099 basis)
- 2013-2016 Clinical Assistant Professor, W.P. Carey School of Business, Arizona State University
- 2012-2013 Visiting Research Associate, Peter Kiewit Institute, University of Nebraska at Omaha
- 2007-2012 Research & Teaching Assistant, Marshall School of Business, University of Southern California
- 2006-2007 Lecturer, International College, China Agricultural University (中国农业大学)
- 2005-2006 Grade School English Teacher, Gyeonggi Province, South Korea
- 2001-2002 Preschool English Teacher, Da Yo Kindergarten, Chushan, Nantou, Taiwan
- 2000-2001 Senior Site Integrator, Walt Disney Internet Group
- 1999-2000 Web Development Specialist, MediaPower Inc., Portland, Maine
- 1998-1999 Web Site Integrator, NBC.com
- 1997-1998 Freelance Web Developer

## University Teaching

- 2018-2019 BUA 490: Special Topics: Data Visualization and Decision Analysis, UMaine
- 2018 BUA 601: Data Analysis for Business (i.e., MBA-level Statistics), UMaine (online)
- 2016-2019 BUA 235: Introduction to Management Information Systems, UMaine
- 2016 Big Data Management—Hadoop, Spark, and NoSQL, Indian School of Business (online)
- 2014-2016 CIS 355: Business Data Warehouses and Dimensional Modeling, ASU
- 2013-2016 CIS 440: Capstone Course in Information Systems, ASU
- 2013-2014 CIS 365: Relational Databases, ASU

## Selected Technology Skills

Programming: Java, Spring Boot, Python 3, Flask, JavaScript, Angular, HTML, CSS, Arduino, Rust  
Databases: PostgreSQL, Oracle, SQLite, other SQL databases  
Big Data and Analytics: Data Warehouse data modeling, MapReduce, Tableau, Excel, R, D3.js  
Infrastructure, DevOps, Project Management: AWS, Git, GitHub, TravisCI, Jenkins, Docker  
Other: Microservices architecture with Spring Cloud, REST API development

## Books

- 2016 A Data Engineer's Manual. [E-book] Leanpub. <https://leanpub.com/data-engineers-manual>  
(in progress) Relating to the Database. [E-book] Leanpub. <https://leanpub.com/relating-to-the-database>

## Ph.D. Dissertation

- 2012 Developing a Theory of Trial-Based Problem Solving Through Simulation Methods. USC.

## Book Chapters

- 2017 Introduction: Pedagogy in Analytics and Data Science. In A.V. Deokar et al (eds.), *Analytics and Data Science*, Annals of Information Systems 21. Springer. (with N. Evangelopoulos & S. Balkan)

## Peer-Reviewed Research Publications

- 2017 Information Systems and the Problem of Work: Protocol for a Systematic Literature Review. *Proceedings of AMCIS*. (with M. Graham and N. Jones)  
2016 When are Real-Time Feedback Loops Most Valuable? New Insights from Bandit Simulations of Decision Making in Turbulent Environments. *Proceedings of HICSS*. (HICSS best paper nominee)  
2015 Technology Frame Disruption During Short-Term Agile ISD Projects. *Proceedings of HICSS*. (with A. Read)  
2014 Plumbing for Philosophers: The Operations of a Data Science Team. *Proceedings of the pre-ICIS SIGDSA Workshop*. (with A. Xu)  
2012 The Strategic Role of Business Intelligence in the Extended Enterprise: BI Configurations for Control Affordances in Outsourcing. *Proceedings of HICSS*.  
2011 Exceptions and Other Rare and Irregular Events: Two Modes of Learning in Business Intelligence. *Proceedings of HICSS*.  
2010 Value Creation of Mobile Services through Presence: Designing Mobile Information and Entertainment Applications with Presence in Mind. *Presence: Teleoperators and Virtual Environments*. (with K.M. Lee, D. Yates, and O.A. El Sawy)

## Teaching Cases

- 2017 Analytics at Lie-Nielsen Toolworks: Custom-Built Data Tools for a Unique Small Manufacturer. *Journal of Information Technology Teaching Cases* 7(2), pp. 79-91.  
2016 Bespoke Analytics at Lie-Nielsen Toolworks. *Proceedings of the Pre-ICIS SIGDSA/IFIP WG8.3 Symposium*.  
2010 Business Intelligence at Guthy-Renker: The Promise and Challenges of Sensing the Pulse. *Proceedings of the SIGDSS/TUN Business Intelligence Congress II*. (with O.A. El Sawy)

## Open Source Software

- 2019-2024 *multimarkov* and *markov\_namegen* (in Rust)  
*markovmodels* and *random-text-generators* (in Java)  
Libraries to support procedural generation of text based on multi-order Markov chains. See GitHub, eg.: [https://github.com/joeclark-phd/markov\\_namegen](https://github.com/joeclark-phd/markov_namegen)  
2019 *granite*: Prototype for a highly-maintainable Spring Boot web application designed for a long lifetime <https://github.com/joeclark-phd/granite>  
2014-2017 *bandito*: multi-armed bandit simulation models in Python <https://github.com/joeclark-phd/bandito>

## Invited Talks

- 2014 "README driven development with GitHub at ASU." Phoenix Scrum User Group, Oct. 7, 2014.

## **Awards and Honors**

- 2017 Family of the Month: November. Knights of Columbus, Council 114.
- 2016 HICSS-49 best paper nomination. For "When are Real-time Feedback Loops Most Valuable?"
- 2013 Young Scholar Program (research award). Pacific Telecommunications Council (PTC'13).
- 2012 Meheroo Jussawalla Research Paper Prize. Pacific Telecommunications Council (PTC'12).  
For a working paper with O.A. El Sawy and F. Pereira.
- 2011 Academy of Management OCIS Division Doctoral Consortium Participant
- 2011 AMCIS Doctoral Consortium Participant
- 2010 Most Adaptable BI Pedagogy Award. SIGDSS/TUN Business Intelligence Congress II.  
For "Business Intelligence at Guthy-Renker" teaching case.

## **Academic Service**

- 2017-2019 Faculty advisor, MIS Club, Maine Business School
- 2016-2019 Technology Committee member, Maine Business School
- 2013-2016 Honors Faculty, ASU
- 2013-2016 IS Department Undergraduate Program Committee, ASU
- 2015-2016 Faculty Advisor, Department of Information Systems Club (DISC), ASU
- 2013-2016 Honors Project/Thesis Director, ASU
  - 2015 Teaching Track Co-Chair, SIGDSA/TUN Business Analytics Congress
  - 2014 Judge, ASU Student Entrepreneurship Initiative

## **Community Service**

- 2020- Firefighter, Farmington Fire Rescue
- 2021- Group Chief, Federation of North-American Explorers (FNE)
- 2023- Mentor (software), FIRST Robotics Competition (FRC) team #9055, Knights of Katahdin
- 2020-2021 Den Leader, Cub Scout Pack 585
- 2017-2018 SCORE Mentor

## **Memberships**

- 2020- American Radio Relay League (ARRL)
- 2015- Knights of Columbus, Council 320
- 2007-2019 Association for Information Systems
- 2009-2019 AIS Special Interest Group on Decision Support and Analytics (SIGDSA)

## **Certifications**

- 2021 Firefighter I & II, Maine Fire Service Institute
- 2020-2030 Amateur Extra class FCC license (ham radio call sign: AC1JO)
- 2019-2025 CompTIA Security+
- 2017 SCORE Certified Mentor
- 2013-2016 Certified ScrumMaster (CSM), ScrumAlliance

## **Language Skills**

- English: Native
- Chinese (Mandarin): Intermediate but rusty

Last updated: January 23, 2024