

Justin F. Brunelle, Ph.D.

CONTACT INFORMATION

Principal Researcher

The MITRE Corporation

Software Engineering Tech Center
Agile Innovation and Engineering Department
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Adjunct Assistant Professor

Old Dominion University

Department of Computer Science
Engineering and Computational Sciences Bldg
4700 Elkhorn Ave.
Norfolk, VA 2352
<http://bit.ly/2v4iqrH>

E-mail: jbrunelle@cs.odu.edu

WEB PRESENCE

-  <http://justinfbrunelle.com/>
-  <https://www.linkedin.com/in/justinfbrunelle/>
-  <https://twitter.com/justinfbrunelle>
-  https://scholar.google.com/citations?user=0_Fdci8AAAAJ
-  https://www.researchgate.net/profile/Justin_Brunelle
-  <http://bit.ly/2lzCCTB>
-  <https://github.com/jbrunelle/>

SECURITY CLEARANCE

TS/SCI - Current

CITIZENSHIP

USA

RESEARCH INTERESTS

Emerging Technologies: cloud computing, big data, mobile, internet of things
Web Science: digital preservation, web archiving, web crawling, information retrieval

EDUCATION

Old Dominion University, Norfolk, VA USA

Ph.D., Computer Science, 2016

- Dissertation Topic: *Scripts in a Frame: A Two-Tiered Crawling Approach for Archiving Deferred Representations*
- Dissertation Proposal: *May, 2016*
- Candidacy: *May, 2014*
- Adviser: Dr. Michael L. Nelson
- Area of Study: Web Science and Digital Preservation

M.S., Computer Science, May, 2010

- *Cum Laude*
- Project: *MiBoard: Multiplayer Interactive Board Game*
- Adviser: Dr. Irwin B. Levinstein
- Area of Study: Intelligent Tutoring Systems

B.S., Computer Science, 2008

- *Cum Laude*
- Minor in Computer Engineering
- Minor in Modeling and Simulation

SHORT BIO

Justin Brunelle is an accomplished researcher, Principal Investigator, and technical leader with experience leading both sponsor-facing and internally-focused research and development projects. He has several roles within The MITRE Corporation. As the Software Engineering Tech Center's Technical Integrator, Justin is responsible for coordinating the division's contributions from its over 400 employees to MITRE internal research and development programs (including the MITRE Innovation Program). His role also involves mentoring less experienced and early career researchers.

Justin is a Publicly Released Employee, one of only 30 employees within MITRE that have authority to publicly publish outside of the traditional public release process. As the MITRE engagement lead for the Federal Technology Summit Series, Justin leads the coordination of the MITRE-ATARC collaboration sessions during the Federal Technology Summits as well as overseeing the publication of whitepapers recapping the events.

In sponsor-facing roles, Justin's work is highly valued and sought after in the technology domains with his primary focus guiding government leaders toward adopting emerging technologies. He typically guides and synchronizes portfolio-level engagements with senior government officials.

PEER-REVIEWED PUBLICATIONS

1. Kyle Dempsey, Justin Brunelle, G. Tanner Jackson, Chutima Boonthum, Irwin Levinstein, Danielle McNamara. "MiBoard: Multiplayer Interactive Board Game", 2009, *Workshop for Educational Games at the 14th International Conference on Artificial Intelligence in Education (AIED)*.
2. Justin F. Brunelle, Irwin B. Levinstein, Chutima Boonthum. "MiBoard: Metacognitive Training Through Gaming in iSTART", 2009, *VMASC Capstone Conference, April 2009*.
 - Best Paper in Track
3. Justin F. Brunelle, Kyle B Dempsey, G. Tanner Jackson, Chutima Boonthum, Irwin B. Levinstein, Danielle S. McNamara. "MiBoard: Metacognitive Training Through Gaming", 2009 *SCiP Conference, 2009*
4. Justin F. Brunelle, G. Tanner Jackson, Kyle Dempsey, Chutima Boonthum, Irwin B. Levinstein, Danielle S. McNamara. "Analysis of MiBoard as an iSTART Practice Tool", 2010, *FLAIRS-24, 2010*
5. Kyle Dempsey, G. Tanner Jackson, Justin Brunelle, Michael Rowe, Danielle McNamara. "MiBoard: Assessing Collaborative Learning Through Game-Based Practice", 2010, *FLAIRS-23, 2010*
6. Justin F. Brunelle "Filling in the Blanks: Capturing the Dynamic Web", 2012, *Doctoral Consortium - JCDL 2012*
7. Justin F. Brunelle, Michael L. Nelson, "An evaluation of caching policies for Memento TimeMaps", *Proceedings of JCDL 2013*, pp. 267-276. (Also available as Technical Report arXiv:1307.5685)
8. Justin F. Brunelle, Michael L. Nelson, Lyudmila Balakireva, Robert Sanderson, Herbert Van de Sompel, "Evaluating the SiteStory Transactional Web Archive With the ApacheBench Tool", *Proceedings of TPDFL 2013*
9. Mat Kelly, Justin F. Brunelle, Michele C. Weigle, Michael L. Nelson, "On the Change in Archivability of Websites Over Time", *Proceedings of TPDFL 2013*. (Also available as Technical Report arXiv:1307.8067)

10. Mat Kelly, Justin F. Brunelle, Michele C. Weigle, and Michael L. Nelson, “A Method for Identifying Personalized Representations in the Archives”, *DLib Magazine*, 19(11/12), 2013
11. Justin F. Brunelle, Mat Kelly, Hany SalahEldeen, Michele C. Weigle, and Michael L. Nelson “Not All Mementos Are Created Equal: Measuring The Impact Of Missing Resources”, 2014, *Proceedings of JCDL 2014*
 - Best Student Paper
12. Justin F. Brunelle, Mat Kelly, Michele C. Weigle, Michael L. Nelson, “The impact of JavaScript on archivability”, *International Journal on Digital Libraries*, 2015
13. Wesley Jordan, Mat Kelly, Justin F. Brunelle, Laura Vobrak, Michele C. Weigle, and Michael L. Nelson, “Mobile Mink: Merging Mobile and Desktop Archived Webs”, *Proceedings of JCDL 2015*
 - Best Poster
14. Justin F. Brunelle, Mat Kelly, Hany SalahEldeen Michele C. Weigle, and Michael L. Nelson, “Not all mementos are created equal: Measuring the impact of missing resources”, *International Journal on Digital Libraries*, 16(3-4), pp. 283–301, 2015
15. Justin F. Brunelle, Michele C. Weigle, and Michael L. Nelson, “Archiving Deferred Representations Using a Two-Tiered Crawling Approach”, *Proceedings of iPRES 2015*, 2015. (Also available as Technical Report arXiv:1508.02315)
16. Justin F. Brunelle, Krista Ferrante, Eliot Wilczek, Michele C. Weigle, and Michael L. Nelson, “Leveraging Heritrix and the Wayback Machine on a corporate intranet: A case study on improving corporate archives”, *DLib Magazine* 22(1/2), 2016
17. Justin F. Brunelle, Michele C. Weigle, and Michael L. Nelson, “Archival Crawlers and JavaScript: Discover More Stuff but Crawl More Slowly”, *Proceedings of JCDL2017*, 2017

RESEARCH
PROPOSALS

1. Various non-releasable proposals with varying success; includes both direct government support and internal research and development.
2. Justin F. Brunelle, George Despres. Save the MII! Digital Preservation for a Secure Intranet *CI&T Innovation Grant*. 2011.
3. Justin F. Brunelle. Security and Permissions in Digital Preservation *E540 I3 Proposal*. 2011.
4. Justin F. Brunelle. Human assisted crawling of dynamic content *E540 I3 Proposal*. 2012.
5. Krista Ferrante, Justin F. Brunelle, Heritrix, the Wayback Machine, and Memento for improving corporate memory, *CI&T Innovation Grant*. 2015. Funded Pilot.
6. Krista Ferrante, Eliot Wilczek, Justin F. Brunelle, Establishing automated crawlers for a corporate intranet, *CI&T Internal Funding*. 2016 Continuation.
7. Justin F. Brunelle, Patrick Benito, Dan Frisk, Paula Randall, Measuring Innovation Cell Impact, *MITRE Innovation Program*, 2018-2019.

OPEN SOURCE
PROJECTS

Warrick and Brass (<http://code.google.com/p/warrick/>) - Recovering lost websites from the Web Infrastructure with the Memento Framework.

Mobile Mink (<https://github.com/Thing342/MobileMemento>) - Merging the mobile and desktop Webs

TECHNICAL
REPORTS &
NON-PEER
REVIEWED
PUBLICATIONS

1. Justin Brunelle, Bob Chadwick, Peter Kertzner, Scott Lee, Fred Stein, Jim Watters, Restricted Distribution, MITRE Technical Report *MTR100260*, September 13, 2011
2. Justin F. Brunelle, Jory T. Morrison, George Despres, "Installation and Experimentation of a Transactional Archive on a Corporate Intranet" *MTR114406*, October 31, 2011
3. Justin F. Brunelle, Michael L. Nelson, "Evaluating the SiteStory Transactional Web Archive with the ApacheBench Tool" *arXiv:1209.1811*, September 09, 2012
4. Geoffrey Raines, Carlos Ramos, Justin Brunelle, Thomas Fugate, "Cloud Computing Design Patterns", Technical Report, *MTR130042*, 2013
5. Justin F. Brunelle, Bruce Gorski, Romanath Roy, Juan Ruiz, "Army Tactical Cloud Architecture", Technical Report, 2014
6. Jory Morrison, Jackie Morin, Carlton Northern, Justin Brunelle, "Windows 8.1 Reference Document for the Army Training and Doctrine Command", Technical Report, *MTR140384*, 2014
7. Justin Brunelle, Robert Daniels, Kimberly Halladay, Laila Moretto, "Features and Trade-offs of Triplestores and Graphstores", Technical Report, 2014
8. Justin F. Brunelle, Karen Caraway, Don Faatz, Nancy Ross, Tom Suder, "July 2014 Federal Cloud Computing Summit Summary", Technical Report, *Case Number 14-3272*, 2014
9. Justin F. Brunelle, Karen Caraway, Nicole Gong, Michael Kristan, Nancy Ross, Tom Suder, "January 2015 Federal Cloud Computing Summit Summary", Technical Report, *Case Number 15-1080*, 2015
10. Justin F. Brunelle, Karen Caraway, Nicole Gong, Julia Packer, Jim Vann, Tim Harvey, Tom Suder, "July 2015 Federal Cloud Computing Summit Report", Technical Report, *Case Number 15-3250*, 2015
11. Justin F. Brunelle, Jory Morrison, Kun Park, David Vincent, Lowell Asher, Scott Lee, "Measuring the Impact of Tactical Cloud Architectures at Brigade and Below Echelons", Technical Report, *MTR150359*, 2015
12. Justin F. Brunelle, Demetrius Davis, Duy Huynh, Mano Malayanur, Bob Natale, Howard Small, Tim Harvey, Tom Suder, "January 2016 Federal Cloud Computing Summit Summary", Technical Report, *Case Number 16-0921*, 2016
13. Justin F. Brunelle, Demetrius Davis, Nicole Gong, Duy Huynh, Michael Kristan, Mano Malayanur, Tim Harvey, Tom Suder, "July 2016 Federal Cloud Computing Summit Summary", Technical Report, *Case Number 16-3496*, 2016
14. Justin F. Brunelle, Nic Van Balen, Kun Park, Lowell Asher, Scott Lee, "Recommendations for Internet of Things Laboratory Experimentation", Technical Report, *MTR160457*, 2016

15. Justin F. Brunelle, Nic Van Balen, Kun Park, Lowell Asher, Scott Lee, “Impact of Internet of Things Adoption in the Command Post”, Technical Report, *MTR160457*, 2016
16. Justin F. Brunelle, Michele C. Weigle, and Michael L. Nelson, “Adapting the Hypercube Model to Archive Deferred Representations at Web-Scale”, Technical Report, arXiv:1601.05142, 2016
17. Justin F. Brunelle, Sunny Anand, Rick Cagle, Michael Kristan, Mari Spina, Katy Warren, Tim Harvey, Tom Suder, “February 2017 Federal Cloud Computing Summit Summary”, Technical Report, *Case Number 17-1286*, 2017
18. Colin Courtney, Aaron LaFrenz, Nicolas Van Balen, Nickyra Jackson, Justin F. Brunelle, Lowell Asher, Scott Lee, “U.S. Army Training and Doctrine Command Mission Command Integration Branch Cloud Migration Recommendations”, Technical Report, *MTR170170*, 2017
19. Nicolas Van Balen, Justin F. Brunelle, Lowell Asher, Scott Lee, “Cloud Enabled COE for FIE”, Technical Report, *MTR170171*, 2017
20. George McPherson, Justin F. Brunelle, Lowell Asher, Scott Lee, “Army Adoption of DIUx Process for Faster Innovation: A Thought Paper”, Technical Report, *MTR170169*, 2017
21. Justin F. Brunelle, Joe Portner, Nancy Ross, Andrew King, “Web Architecture for the Internet of Things”, *Case Number 17-1594*, 2017
22. Patrick Benito, Marie Collins, CJ Rieser, Darshan Kadam, Mike Schoenfeld, Jeff Stein, Greg Kern, Carlton Northern, Mike Peck, Justin F. Brunelle, Tim Harvey, Tom Suder, “March 2017 Federal Mobile Computing Summit Report”, Technical Report, *Case Number JFB-001*, 2017
23. Justin F. Brunelle, Sunny Anand, Greg Barmine, Mari Spina, Katy Warren, Audrey Winston, Mannan Javid, Aaron Kemmer, Christine Kim, Said Masoud, Tim Harvey, Tom Suder, “August 2017 Federal Cloud & Data Center Summit Summary”, Technical Report, *Case Number 17-3231-2*, 2017
24. Michelle Casagni, Melissa Heeren, Rick Cagle, Diane Hanf, Michael Kristan, Justin F. Brunelle, Tom Suder, and Tim Harvey. “2017 Federal DevOps Summit Report”, Technical Report *Case Number 17-3231-3*, 2017
25. Justin F. Brunelle, Eileen Durkin, Mark Wahnish, Robert Cherinka, and Pat Benito. Restricted Distribution, MITRE Product *MP170855*, 2017
26. Justin F. Brunelle. Restricted Distribution, MITRE Product *MP180012*, 2018
27. Justin F. Brunelle. Restricted Distribution, MITRE Product *MP180005*, 2018
28. Christine Harvey, Justin F. Brunelle, Ronald Campbell, Richard Eng, Anne Tall, Haleh Vafaie, Anuja Verma, Tom Suder, and Tim Harvey. “December 2017 Federal Big Data Summit Report”, Technical Report *Case Number 17-3231-4*, 2018
29. Collin McRae, Patrick Benito, Chris Brown, Dave Keppler, Jeff Stein, Kevin Boston, CJ Rieser, Justin F. Brunelle, Tom Suder, and Tim Harvey. “October 2017 Federal Mobile Technology Summit Report”, Technical Report *Case Number 17-3231-5*, 2018

30. Michael A. Aisenberg, R. Scott Paul, Nickyra M. Jackson, Bill Hill, Said A. Masoud, Brian W. McKenney, Mari J. Spina, Justin F. Brunelle, Tom Suder, and Tim Harvey. “January 2018 Federal CISO Summit Report”, Technical Report *Case Number 17-3231-6*, 2018
31. Justin F. Brunelle, Restricted Distribution, MITRE Product *MP180341*, 2018
32. Michelle Casagni, Melissa Heeren, Rick Cagle, Richard Eng, Jennifer Flamm, Seth Goldrich, Diane Hanf, Michael Kristan, Justin F. Brunelle, Tom Suder, and Tim Harvey. “March 2018 Federal DevOps Summit Report”, Technical Report *Case Number 17-3231-7*, 2018
33. John Griffith, Sophia Applebaum, David Goldenberg, Clara Hall, Chuck Howell, Marc Schneider, Daniel Weiss, Justin F. Brunelle, Tom Suder, and Tim Harvey. “January 2018 Federal Emerging Technologies Summit Report”, Technical Report *Case Number 17-3231-8*, 2018
34. Justin F. Brunelle, AJ Bognar, Vibha Dhawan, Nicole Gong Parrish, Andy King, Vidyababu Kuppusamy, Mano Malayanur, Tom Suder, and Tim Harvey. “July 2018 Federal Cloud & Data Center Summit Report”, Technical Report *Case Number 18-2725-1*, 2018
35. Justin F. Brunelle. Restricted Distribution, MITRE Working Note *WN180068*, 2018
36. Justin F. Brunelle. Restricted Distribution, MITRE Product *MP180615*, 2018
37. Justin F. Brunelle, R. Patrick Benito. Restricted Distribution, MITRE Product *MP180745*, 2018

BOOK CHAPTERS

1. Justin F. Brunelle and Chutima Boonthum-Denecke. Natural Language Processing Tools. *Cross-Disciplinary Advances in Applied Natural Language Processing: Issues and Approaches*. IGI Global, 2012. 9-23. Web. 7 Mar. 2012. doi:10.4018/978-1-61350-447-5.ch002
2. Justin F. Brunelle, David Bryson, DJ Shyy, Yaakov Weinstein. Chapter Six: The Future of Systems Architecture. *Edited Volume: Big Data*. Joint Special Operations University, *To Be Published*. XX-YY. (Also available as a MITRE Technical Report MTR180562.)

INVITED PRESENTATIONS

1. Justin F. Brunelle *Various Topics*, MITRE Internal Technical Exchange Meetings, 2010-present
2. Justin F. Brunelle *Digital Preservation Research at ODU*, National RRAC Archivists Meeting, Fall, 2010
3. Justin F. Brunelle *Day in the Life of a Computer Scientist*, Ocean Lakes High School Academy Information Seminar, November, 2010
4. Justin F. Brunelle *Agile Engineering*, ODU Chapter of the ACM, November, 2011
5. Justin F. Brunelle *PERL and Warrick*, ODU Chapter of the ACM, February, 2012
6. Justin F. Brunelle *Day in the Life of a Computer Scientist*, ODU CS110 Guest Lecture, November, 2011

7. Justin F. Brunelle *What is Computer Science?*, Benjamin Syms Middle School, November, 2011
8. Justin F. Brunelle *Agile Engineering Principles*, Old Dominion University, September, 2012
9. Justin F. Brunelle *Leveraging Academia in Government Cloud Computing Research*, Federal Cloud Computing Summit, 2013
10. Justin F. Brunelle, Daniel Ruiz; Session Lead: *MITRE-AMARC Collaboration Sessions*, Federal Big Data Summit, 2014
11. Justin F. Brunelle; Panel: *MITRE-AMARC Collaboration Sessions*, Federal Cloud Computing Summit, 2014-2016
12. Justin F. Brunelle *MITRE Hampton Roads 101*, ODU Chapter of the ACM, February 2016
13. Justin F. Brunelle *Panel Interview: Answering Your Cloud Computing Questions*, GovLoop's DorobekINSIDER Live, May 2016
14. Justin F. Brunelle, Joseph Portner *Pizza My Mind: MITRE 101*, CNU, September 2016
15. Justin F. Brunelle *Building a Researcher*, New Horizons Governor School for Science and Technology, November 2016
16. Justin F. Brunelle *Big Data, High Performance Computing, and Simulation*, Panel, MODSIM World, 2018

REFeree SERVICE

1. MITRE Lead, Federal Technology Summit Series (2016-present)
2. MITRE Chair, Federal Cloud & Data Center Summit (2014-present)
3. MITRE Co-Chair, Federal Big Data Summit (2017)
4. External Advisor, JSOU Big Data Symposium, February 2018
5. Program Committee Member for FLAIRS Conference (FLAIRS 23-present)
6. Program Committee Member for AIMS Conference (2016-present)
7. Program Committee Member for JCDL (2016-present)
8. Program Committee Member for IARIA (2016-present)
9. Program Committee Member for WADL (2018)
10. Journal of Computer Engineering & Information Technology (2017)
11. Organizing Committee Member (posters/demos chair) for JCDL 2017
12. Hampton Technology Student Association Competition Judge (2015)
13. International Journal of Digital Libraries (2014)
14. ARTSI Competition Judge (2010, 2012)

WORKSHOP
PARTICIPATION

1. Federal Technology Summit Series, 2013-present
2. IIPC General Assembly - Archiving the Future Web, April 2012
3. Web Archiving Cooperative workshop at Stanford, June 2012
4. Doctoral Consortium - JC DL, June 2012
5. How I Spend My Summer Vacations - WADL, July 2013
6. Federal Big Data Summit, June 2014, December 2017
7. Doctoral Consortium - JC DL, June 2017
8. NASA Langley 100th Anniversary Centennial Symposium, July 2017
9. JSOU Big Data Symposium, February 2018
10. MODSIM World, April 2018
11. Chief Data & Analytics Officer, Government event, May 2018

AWARDS

1. BSA Eagle Scout, 2003
2. Gene Newman Award for best paper - Lockheed Martin General Sciences track 2008
3. ODU Computer Science Department Outstanding Research Assistant, 2008
4. Birnbaum Scholarship award, SCiP 2009
5. MITRE Spot Award, 2012
6. MITRE Spot Award, 2013
7. Nominated for MITRE's Early Career Research Program, 2013
8. MITRE Director's Award – 2014 Cloud Computing Summit, 2014
9. MITRE Spot Award – Federal Big Data Summit, 2014
10. Best Student Paper – DL2014, 2014
11. Best Poster – JC DL2015, 2015
12. ODU Computer Science Department Outstanding Researcher, Fall 2015
13. MITRE SERA Award, 2016
14. MITRE Department Manager's Award – STEM Outreach, 2016
15. MITRE SPARK Award – ONR Support, 2016
16. MITRE SPARK Award – VA Support, 2017
17. MITRE Ribbons for Outreach Activity Recognition
 - (a) T850 Q4-2017 (owned 10/31 division highlights)
 - (b) T850 Q1-2018
 - (c) T850 Q2-2018
18. MITRE SPARK Award – Innovation Cell Planning, 2018
19. MITRE Applause Award – MODSIM World Panel Participation, 2018
20. MITRE SPARK Award – Sponsor Experimentation Campaign, 2018

TEACHING
EXPERIENCE

1. Introduction to Web Development (TCC, 2008 & 2009)
2. Introduction to Modeling and Simulation for Game Developers (TCC, 2008 & 2009)
3. Advanced Modeling and Simulation for Game Developers (TCC, 2009)
4. Consulted for City of VA Beach Parks and Rec's Video Game Design course (2011)
5. CS418/518: Web Programming, Old Dominion University (Fall 2016, 2017, 2018)

STUDENTS

1. *Mentor, Ocean Lakes High School*: Brian Hsiung (2012)
2. *Mentor, New Horizon's Governor School*: Jackie Morin (2012)
3. *Mentor, New Horizon's Governor School*: John Herman (2013)
4. *Mentor, New Horizon's Governor School*: Radha Venkatesan (2014)
5. *Mentor, New Horizon's Governor School*: Wes Jordan (2015)
6. *Mentor, New Horizon's Governor School*: David Thames (2016)
7. *Mentor, Hickory High School*: Gavin Alberghini (2016, 2017)
8. *Mentor, New Horizon's Governor School*: Emily Vogt (2017)
9. *Mentor, New Horizon's Governor School*: Ryan Lenfant (2018)
10. *MS Committee, ODU*: John Berlin (2018)
11. *PhD Committee, William & Mary*: Nicolas Van Balen (2017)

TRAINING
COURSES

Hands-on Hadoop (MITRE Institute 2012)
Cloud Computing (MITRE Institute 2012)
DoD Cloud Forum (MITRE Institute 2013)
Community-led Action in Response to Violent Extremism (University of Maryland START, 2018)

PROFESSIONAL
EXPERIENCE

Principal Researcher - The MITRE Corporation (February 2010 - present)

- Division Technical Integrator, responsible for the Software Engineering Tech Center's contributions, alignment, and success of proposal submissions to the MITRE Internal research program. The division contains over 400 employees that submit nearly 100 proposals annually; typical success rates outperform company-wide averages.
- MITRE Chair of the Federal Technology Summit Series (including Mobile, Big Data, Cloud, Emerging Technologies, Agile and DevOps, IT Modernization, and Cyber Security). Leading a team of 7 event chairs and over 40 session leads annually. Also serves as corporate lead for MITRE's engagement with ATARC, Federal Cloud Summit Chair, and lead whitepaper author. The Federal Technology Summits typically include over 200 attendees from industry, academia, FFRDC, and government (including CEOs, CTOs, and practitioners).

- Lead author for the Federal Cloud & Data Center Summit white paper series which creates recommendations for industry, government, and academia to help facilitate government adoption of cloud services.
- Chief Scientist for data-to-decisions efforts in support of a DoD sponsor. Responsibilities include leading technology recon efforts, experimental design and evaluation, and technical leadership regarding big data experimentation.
- MITRE subject matter expert and researcher for emerging technologies (e.g., big data, cloud, mobile, internet of things)
- Extensive data management experience, cloud computing studies, and innovation efforts throughout the federal government and within MITRE
- Experience leading several multi-disciplinary teams of varying sizes and demographics to the benefit of our tasks, projects, and sponsors; task goals typically revolve around government adoption or refinement of emerging technologies to achieve strategic goals
- Technical advisor on cloud computing and other emerging technologies to numerous Department of Defense and Intelligence Community sponsors
- Hampton Roads site STEM outreach coordinator (2011-2016)
- Site lab manager (2010-2014)
- PI/Co-PI of multiple cloud computing and web science internal research and development projects
- Member of the Agile Innovation department; helping sponsors achieve innovation using a variety of approaches

Adjunct Assistant Professor - Old Dominion University (August 2016 - December 2018)

- Designed and taught graduate Web development course

Adjunct Instructor - Tidewater Community College (July 2008 - August 2009)

- Designed and taught Web development, Introduction to Modeling and Simulation for Game development, Advanced Modeling and Simulation for Game development
- Week long STEM courses for “at-risk” high school students

Lead Developer - iSTART (June 2003 - May 2010)

- Held positions of software tester, web developer, and lead programmer
- Project focused on natural language processing for intelligent tutoring systems and serious games
- Designed and developed research tools and module elements
- Lead a team of 2-3 developers at ODU in support of partners at the University of Memphis to include design specifications, progress reports, testing, and team management