

Michael D. Byrd

PhD, CPA

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Summary

I am an entrepreneur, an educator, a researcher, a computer scientist, and a forensic accountant. I have broad experience in developing and implementing data analytics solutions in a variety of contexts. I am also a Certified Public Accountant and have experience running global investigations and data analytics projects at Big-4 accounting firms.

Research

Interests: Using HCI devices, behavioral analytics, and computational linguistics for cognitive inference and the detection of deception, fraud, and malicious behavior; judgement and decision making; the use of internal controls and organizational design to mitigate risk

Methods: Behavioral experiments, design science, surveys

Teaching

Systems Analysis and Design (MIS Masters), Strategic Management of IT (MBA Core), MBA/MIS Experiential Learning, Entrepreneurship, Lean Startup, Forensic Accounting, Forensic Data Analytics, Business Analytics, IT Risk

Education

2018 The University of Arizona, Eller College of Management

Ph.D. in Management

Major: Information Systems, Minor: Computational Linguistics

Dissertation Title: An Empirical Exploration of Countermeasures
in HCI-Based Deception Research

Committee: Joe Valacich (chair), Sue Brown, Judee Burgoon, Jeff Jenkins

2003 The University of Texas at Austin, McCombs School of Business

Master of Business Administration

Concentration in Information Systems and Operations Management

1999 Missouri State University

Bachelor of Science, *summa cum laude* in the Honors College

Majors: Computer Science and Mathematics, Minor: Physics

Publications

Journal Articles

1. Proudfoot, J., Wilson, D., Valacich, J., & Byrd, M. (2018). Saving face on Facebook: privacy concerns, social benefits, and impression management. **Behaviour & Information Technology**, 37(1), 16-37.
2. Williams, P., Jenkins, J., Valacich, J., and Byrd, M. (2017) "Measuring Actual Behaviors in HCI Research – A call to Action and an Example," **AIS Transactions on Human-Computer Interaction** (9) 4, pp. 339-352
3. Burgoon, J., Mayew, W., Giboney, J., Elkins, A., Moffitt, K., Dorn, B., Byrd, M., and Spitzley, L. (2016) "Which Spoken Language Markers Identify Deception in High-Stakes Settings? Evidence From Earnings Conference Calls" **Journal of Language and Social Psychology** March 2016 35: 123-157
4. Byrd, S., Byrd, M., Byrd, D. (2014) "Do Supplemental Online Review Questions Impact Exam Scores in an Introduction to Financial Accounting Course." **Journal of Contemporary Business Issues** Volume 21 Number 1 Fall 2014

Conference Articles & Presentations

1. Valacich, Joseph S; Jenkins, Jeff; Byrd, Michael; Kim, David; Kumar, Manasvi; and Williams, Parker, "Using Accelerometer and Gyroscope Data in Common Mobile Devices to Assess Credibility" (2020) AMCIS 2020 Proceedings 25.
2. Byrd, M., Jenkins, J.L., Kim, D., Kumar, M., Schwartz, A.W., Valacich, J.S., Williams, P.A., & Wright, R.T. (2019). Understanding Unauthorized Access using Fine-Grained Human-Computer Interaction Data. 2019 Pre-ICIS SIG HCI Workshop.
3. Byrd, M., Jenkins, J.L., Valacich, J.S., & Williams, P.A. (2018). Creating a Realistic Experimental Scenario for HCI-Based Deception Detection Research with Ground Truth and Un-Sanctioned Malicious Acts. 2018 Pre-ICIS SIG HCI Workshop.
4. Valacich, J., Byrd, M., Williams, P. "A Research Protocol for Examining Countermeasures: Developing Ground Truth and Motivating and Adequate Malicious Base Rate" in Jensen, M., Meservy, T., Burgoon, J., and Nunamaker, J., *Report of the HICSS-51 Rapid Screening Technologies, Deception Detection and Credibility Assessment Symposium*, January 2018
5. Valacich, J., Jenkins, J., and Byrd, M. "Suspicion Detection in the Wild: Lessons Learned from and Early Stage Company" in Jensen, M., Meservy, T., Burgoon, J., and Nunamaker, J., *Report of the HICSS-49 Rapid Screening Technologies, Deception Detection and Credibility Assessment Symposium*, January 2016
6. Byrd, M., Grimes, M., Marquardson, J., and Burgoon, J. "The Misclassification of Deceptive Behavior" in Jensen, M., Meservy, T., Burgoon, J., and Nunamaker, J., *Report of the HICSS-48 Rapid Screening Technologies, Deception Detection and Credibility Assessment Symposium*, January 2015

Recent Blog Posts

1. McCarthy, M., Byrd, M. "How to build AI that society wants and needs" World Economic Forum *Agenda* Blog, July 2021
<https://www.weforum.org/agenda/2021/07/how-to-build-ai-that-society-wants-and-needs/>

Teaching Experience

- 2018 – 2019** Lecturer / Visiting, Department of Management Information Systems
The University of Arizona, Eller College of Management
- MIS 541 Information Systems Analysis and Design
 - MIS 416/516 Information Security Risk Management (online)
 - MIS 307 Data Communications
 - Faculty Advisor for MBA/MS-MIS Experiential Learning Consulting Projects
 - MISA Faculty of the Year 2018-19
- 2013 – 2018** Graduate Teaching Associate, Department of Management Information Systems
The University of Arizona, Eller College of Management
- 2014 – 2018: TA for MIS 541 Systems Analysis and Design
 - 2015 – 2018: TA for MIS 585 Strategic Management of Information Systems (MBA Core)
 - 2015 – 2018: Faculty Advisor for MBA Experiential Learning Consulting Projects
 - 2016: MIS 304 Using and Managing Information Systems
- 2010** Graduate Assistant, Department of Accounting
Washington State University, Carson College of Business
- Fall '10: Intermediate Accounting I – 1 section
- 2009 – 2010** Instructor, School of Accountancy
Missouri State University
- Fall '09: Intermediate Accounting I – 4 sections
 - Spring '10: Intermediate Accounting I – 3 sections, II – 1 section
- 2004 – 2005** Graduate Assistant, Department of Accounting
Indiana University, Kelly School of Business
- Spring '05: Managerial Accounting – 1 section

Grants

NSF Grant #1615696

- Social and Economic Sciences, Secure and Trustworthy Cyberspace Program
- Identifying Malicious Insiders through Mouse Cursor Movements
- \$300,000

Assisted with the preparation of additional grant applications for NSF, DARPA, IARPA, US Army, DHS, & In-Q-Tel

Also worked on research funded by DHS, NSF/CITeR, and DHS/BORDERS

Professional Experience

7/20 – Present	Head of Product <i>So.Ai, Inc.</i> <ul style="list-style-type: none">• Startup in the responsible use of technology space• Design and develop products• Build and manage product and development team• Communicate with executives, customers, investors, and other stakeholders
8/18 – 9/19	Lecturer / Visiting Department of Management Information Systems <i>The University of Arizona, Eller College of Management</i> <ul style="list-style-type: none">• See "Teaching Experience" above
7/13 – 6/18	Graduate Assistant / Teaching Associate / Research Associate Department of Management Information Systems <i>The University of Arizona, Eller College of Management</i> <ul style="list-style-type: none">• Design and execute studies, analyze data, compile, and report results• Assist with grant and proposal writing• Assist with teaching in classroom, online, and experiential learning consulting program• Taught in the Undergraduate, MIS Masters, and MBA programs
11/14 – 7/18	Chief Product Officer <i>Neuro-ID, Inc.</i> <ul style="list-style-type: none">• Startup to commercialize research with advisor• Design and develop products to employ IP in market• Translate research findings to business value propositions• Build and manage data analytics process and team• Communicate with executives, customers, investors, and other stakeholders
3/11 – 7/13	Senior Manager – Forensic Technology and Discovery Services Group <i>Ernst and Young, LLP – Fraud Investigation and Dispute Services Practice</i> Forensic Accounting, Data Analysis, and Investigation Support <ul style="list-style-type: none">• Coordinated and led all electronic evidence related workstreams (data preservation, investigation support, data analysis, and electronic discovery) for a large Commodities and Securities Broker Dealer bankruptcy. Oversaw 50+ professionals for over 6 months• Led project to collect and analyze financial data from 40+ ERP systems in 25 countries as part of a global FCPA review at a Fortune 500 manufacturing firm

- Led project to collect, analyze, and facilitate the review of email and wire-transfer data as part of an anti-money-laundering look-back investigation at a global bank
- Led project to collect, analyze and facilitate the review of financial data and email as part of a tax compliance investigation at a multi-billion dollar holding company
- Led project to collect and analyze enterprise log data (firewall, proxy, event logs, active directory) as part of a cyber-security investigation for a global client
- Led multiple proactive anti-fraud and anti-corruption data analysis projects

Innovation, Practice Development, and Leadership

- Co-led the development of rogue employee / rogue trader analytics service offering
- Led the deployment and implementation of multiple enterprise software platforms: data integration, link analysis, and geospatial analysis software; statistical analysis and predictive modeling software; social network / relationship analysis software
- Led FIDS involvement in the firm-wide Audit Transformation initiative – assisted with the design and development of the 'Audit Tool of the Future' and with the integration of anti-fraud analytic platforms into the assurance practice
- Co-led an overhaul of the FTDS training curriculum and helped grow the NYC FTDS practice from 12 to over 65 professionals

8/10 – 12/10

Graduate Assistant – Department of Accounting

Washington State University, Carson College of Business

- See "Teaching Experience" above

8/09 – 7/10

Instructor, School of Accountancy

Missouri State University, College of Business Administration

- See "Teaching Experience" above

6/08 – 3/09

Manager – Analytics and Forensic Technology Group

Deloitte Financial Advisory Services – Forensic & Dispute Services Practice

Forensic Accounting and Data Analysis

- Led team to collect, analyze, and report upon due diligence data related to FCPA compliance at a Global Fortune 500 Insurance Company
- Led team to collect, analyze, and report upon data related to a breach of private data at a major local hospital

Investigation Support and Electronic Discovery Consulting

- Managed the collection, processing, and review of electronic evidence related to a FCPA investigation for a Global Fortune 500 manufacturing firm

10/05 – 5/08

Senior Staff – Forensic Technology and Discovery Services Group

Ernst and Young, LLP – Fraud Investigation and Dispute Services Practice
Forensic Accounting and Data Analysis

- Performed analysis of journal entries to isolate source of \$30 million account balance discrepancy for a Fortune 100 computer manufacturer.
- Gathered and analyzed stock option data for vendor reconciliation for a Fortune Global 100 Bank.
- Coordinated and performed data collection and analysis for global inter-company reconciliation project for a Fortune Global 100 Financial Services Company.

Computer Forensics

- Internally certified to lead imaging teams and perform solo field collections.
- Coordinated collection of electronic evidence from 17 countries to support an FCPA investigation by a global manufacturing company.
- Managed team to image over 100 laptop drives in less than two weeks. Coordinated revolving staff while performing quality control steps and maintaining comprehensive supporting documentation.

Investigation Support and Electronic Discovery Consulting

- Assisted a Fortune Global 100 Financial Services Company with developing a comprehensive Electronically Stored Information (ESI) inventory map and global deployment of a litigation hold protocol for ESI. This project involved extensive international travel.
- Supported three separate investigations for a Fortune Global 100 Financial Services Company. Activities included on-site collection of electronic evidence, loading of electronic evidence into online review tool, on-site support for counsel, and coordination of production to third parties. This project involved extensive international travel.
- Supported an investigation for a Fortune 500 Pharmaceutical Care Company. Activities included on-site collection of electronic evidence, on-site support for counsel, and development of custom reports and tools for custodian tracking and analysis.

Practice Development, Leadership and Learning

- Lead instructor for internal data analysis course, September 2007.
- Instructor for multiple internal Computer Forensics and Electronic Discovery courses.
- Member of core team that selected new global electronic discovery tool, advanced text analytics tools, evidence tracking system, and data preparation software.
- Authored specification for next generation Computer Forensics Field Kit.
- Helped lead the establishment and outfitting of new technology lab in Chicago office.

8/04 – 5/05

Graduate Assistant – Department of Accounting

Indiana University, Kelley School of Business

- See "Teaching Experience" above

5/02 – 8/02

Forensics and Dispute Consulting Intern

BKD, LLP

- Performed computer forensics procedures, including gathering electronic evidence, analyzing evidence, and formal reporting of findings.
- Analyzed accounting records of a large Health Care provider to deter fraud and assure compliance with public financing regulations.
- Created new format allowing for electronic distribution of reports containing large amounts of digital information.

11/00 – 5/01

Software Engineer

eLaw.com

- Worked with a cross functional team to design and implement enhancements to e-Commerce applications including a net-marketplace containing over 10,000 legal documents.
- Supported the deployment of mission critical software in a production environment.

5/00 – 10/00

Senior Computer Scientist

Computer Sciences Corporation

- Assisted in the re-architecting of an overdue \$50 million enterprise infrastructure project resulting in project being completed on schedule.
- Prepared and presented lectures on Web application architecture, design, and programming to over 50 consultants.

8/99 – 5/00

Software Engineer

TV-Guide, Inc.

- Designed communication protocols and developed data distribution architecture for nationwide digital cable channel available in over 5.0 million US households.
- Implemented new approach to functionality demos resulting in a 500% reduction in time required per iteration.

Certifications

Certified Public Accountant (Cert No 88577)

Certified Fraud Examiner (2004 – 2020)

Certified Information Technology Professional (until 2022 – Cert No 1673)

Chartered Global Management Accountant (until 2022)

Professional Organizations

Association for Information Systems – Academic Member (until 2019)

American Institute of Certified Public Accountants – Member

- Forensic and Valuation Services Section (until 2022)
- Information Management and Technology Assurance Section (until 2022)

Association of Certified Fraud Examiners – Member (2004 – 2020)

American Accounting Association – Member

Service

Ad-hoc Reviewer Journal of Management Information Systems
 International Conference for Information Systems
 Americas Conference on Information Systems
 Hawaii International Conference on System Sciences
 Pre-ICIS SIG-HCI Workshop

STEM Outreach Assisted with ISACA "Raspberry Pi Christmas Lights Day"
 Assisted with ISACA "Raspberry Pi Battle Bots Day"

Personal

I enjoy martial arts, biking, photography, woodworking, and cooking.