





MATTHEW D. PICKARD

I am an Assistant Professor of Accounting Data and Analytics. My Ph.D. and academic experience has honed my critical thinking and communication skills. I love data analytics and love the R and tidyverse ecosystem. I have created an automated, avatar-based interviewing system for my dissertation and am currently creating and validating a tax-specific word embedding from the U.S. tax code and federal regulations. I have learned Spark (to teach a big data class), Keras (for fun), and R Shiny.



I am seeking a position that will let me focus full-time on my passion for data, analytics, machine learning, and artificial intelligence (especially deep learning) to bring valuable insights from data to a company in whose mission I believe.



EDUCATION

- 2012**
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2008
Ph.D., MIS
Tucson, AZ  University of Arizona
 - Dissertation: Persuasive Embodied Agents: Using Embodied Agents to Change People's Behavior, Beliefs, and Assessments
 - Developed an avatar-based automatic interviewing system. System handled text-to-speech and basic linguistic analysis.
- 2008**
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2006
M.B.A, Operations Management and Information Systems
Provo, UT  Brigham Young University
 - Winner of first annual web business idea competition.
- 2002**
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1999
B.S., Computer Engineering
Provo, UT  Brigham Young University
- 1999**
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1995
A.S., Electrical Engineering
Rexburg, ID  Ricks College (now BYU-Idaho)








ACADEMIC POSITIONS

- Current**
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2018
Assistant Professor of Accounting Data and Analytics
Dekalb, IL  Northern Illinois University
- 2018**
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2012
Assistant Professor of Accounting Data and Analytics
Albuquerque, NM  University of New Mexico
 - Developed data and analytics course based in R and Excel.
 - Served as committee chair for 14 MBA for Educators professional practicum theses—provided guidance on problem definition, research questions, methodology, and data analysis.

CONTACT

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 www.linkedin.com/in/mattpickard

TECHNICAL SKILLS

 R
 Python
 C++
 Excel
 SQL
 Spark
 R Shiny

Made with the [pagedown](#) and [datadrivencv](#) R packages.

Last updated on 2020-10-09.



INDUSTRY EXPERIENCE

2017
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2017

Faculty Summer Data Analytics Intern

Albuquerque, NM

📍 Sandia National Labs

- Prototyped several interactive visualizations in R, using R Shiny, that were originally built in Tableau.
- Convinced management of the advantages of using R Shiny for production visualizations.

2006
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2005

Project Manager

Austin, TX

📍 National Instrument

- Protected company's market share by leading a team of 15 people to develop proposals for the Directors of Engineering in order to address the threat of an emerging industry standard. The directors were sufficiently informed to make decisions.
- Effectively presented the details of the emerging standard to VP of Engineering and 55 engineers via PowerPoint presentations.
- Met the requirements of 5 other projects while managing a strategic software driver project. Shipped the driver project on time and within budget.

2005
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2004

Software Engineer

Austin, TX

📍 National Instrument

- Cut product testing time in half. Re-engineered testing process and drove the purchase of dedicated test equipment. Rewrote system in Python XML-RPC.
- Increased testing coverage by 25%. Organized testing procedures in a database to better track progress and coverage.
- Used a variety of tools and systems, including Microsoft Visual Studio 6.0, Microsoft Visual Studio .NET, Python, Perforce, SoftIce, Microsoft Driver Signing, Mac OS X, Unix, and Linux.

2004
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2002

Application Engineer

Austin, TX

📍 National Instrument

- Created 800+ satisfied customers through excellent technical support for various National Instruments products. Representative feedback is reflected in one customer's comment: "When Matt took over, the process really started moving along."
- Improved technical skills of 90 customers by teaching 12 one-week courses. Averaged 4.6 out of 5 for customer satisfaction.
- Rated #1 out of 95 employees for improvements to company's support website.

2002
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2000

Engineering Intern

Provo, UT

📍 National Instrument

- Increased National Instrument's reputation on BYU's campus by training 100 students and 5 professors on technical software. Original training program was discontinued by BYU. Responded by freelancing new training for an expanded set of students.

In my work experience, I have spanned both the technical and soft skills, from software developer, to support engineer, to project manager, to teacher. All these positions have taught me to solve problems both with machines and people.



SOFTWARE PROJECTS

- 2020 • **Tax-Specific Word Embedding**
Northern Illinois University
- Extracted and prepared text from U.S. Tax Code and Tax Regulations and built a word vector embedding. Validated the word embedding with the help of tax lawyers and practitioners. Used R and Python for text processing and analysis.
- 2008 • **Facebook Gift Recommender**
University of Arizona
- Designed an application which leveraged information from Facebook profiles to recommend gifts. The application mashed up web services from sites such as Amazon, Google, and Eventful.com. Wrote large portion of the prototyping code in Python.
- 2001 • **Real-time Operating System**
Brigham Young University
- Designed a real-time kernel which performed interrupt handling, scheduling, and dispatching. It also included queue, semaphore, mutex, and event primitives. Majority of the code was written in C. Increased performance of the OS by tweaking the assembly.
- 2000 • **Complete Networking Protocol Stack**
Brigham Young University
- Created the Physical, Ethernet, IP, TCP layers of the TCP/IP networking protocol stack. Also implemented CRC, ARP, NAT, and a simple HTTPD. Designed a suite of testing tools in order to accelerate the debugging process.
- 1999 • **Complete Networking Protocol Stack**
Brigham Young University
- Designed an OO application in C++ which traversed a webpage and its links, then indexed the contents in a dictionary-like format.



COURSES TAUGHT

- Current
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2018 • **Accounting Data and Analytics**
Northern Illinois University
- Advanced Excel skills.
 - Data visualization with Tableau.
 - Developed project that requires students to implement k-means clustering algorithm in Excel.

I enjoy learning and helping others learn. I believe empathy is important in teaching. My teaching experiences have honed my communication skills, taught me to ask questions to insure understanding, and heightened my realization of what I want to learn.

- 2020
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2020
 - **Big Data**
Northern Illinois University
 - Created and managed an Apache Spark cluster on AWS for students.
 - Taught tidyverse, dplyr, and sparklyr.
 - Taught various types of modeling (regression, k-means clustering, classification, and natural language processing).
- 2018
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2016
 - **Data Analytics**
University of New Mexico
 - Designed course centered on Excel and R.
 - Taught optimization, regression, classification, and clustering.
- 2016
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2012
 - **Accounting Information Systems**
University of New Mexico
 - Taught data flow diagramming, system flowcharts, and entity relationship diagrams.
 - Taught accounting transaction cycles (specifically, revenue and expenditure).
 - Taught SQL (including joins and nested queries).



TRAININGS TAUGHT

- 2018
 - **R and R Shiny**
Sandia National Labs
- 2018
 - **Data Flow Diagrams and Flowcharts**
City of Santa Fe
- 2017
 - **Mastering the Basics of Excel**
City of Santa Fe
- 2017
 - **Using Excel to Boost Your Audit Analytics**
ISACA—Albuquerque, NM Chapter
- 2015
 - **Audit Analytics in Excel**
AGA—Albuquerque, NM Chapter
- 2010
 - **Scripting in Perl**
Raytheon Missile Systems

PUBLICATIONS

- 2020
 - **Innovative Accounting Interviewing: A Comparison of Real and Virtual Accounting Interviewers**
Pickard, Schuetzler, Valacich, Wood 📍 Accounting Review
- 2020
 - **Using computer automated systems to conduct personal interviews: Does the mere presence of a human face inhibit disclosure?**
Pickard, Roster 📍 Computers in Human Behavior

I have delivered a variety of training courses to diverse audiences.

- 2017 ● **Development and Application of a Self-Report Measure for Assessing Sensitive Information Disclosures across Multiple Modes**
Pickard, Wilson, Roster 📍 Behavior Research Methods
- 2016 ● **Revealing Sensitive Information in Personal Interviews: Is Self-Disclosure Easier with Humans or Avatars and Under What Conditions?**
Pickard, Roster, Chen 📍 Computers in Human Behavior
- 2015 ● **From Bean Counters to Bean Growers: A Customer Profitability Analysis Example Illustrating the Call of Data Mining and Analysis for Accountants to Grow Their Role**
Pickard, Cokins 📍 J. of Information Systems
- 2015 ● **Avatars Interviewers: Computer-Assisted Interviews: Fact or Folly?**
Brody, Pickard, Agins 📍 Fraud Magazine
- 2014 ● **Toward an Objective Linguistic-Based Measure of Perceived Embodied Conversational Agent Power and Likeability.**
Pickard, Burgoon, Derrick 📍 Intl J of HCI
- 2014 ● **Proposing the Affect-Trust Infusion Model (ATIM) to Explain and Predict the Influence of High- and Low-Affect Infusion on Web Vendor Trust**
Lowry, Jenkins, Pickard, Twyman, Bui 📍 Information & Management
- 2013 ● **Theoretical Justification of Embodied Conversational Agents (ECAs) to Augment Accounting-related Interviewing Processes**
Pickard, Burns, Moffitt 📍 J of Information Systems



SERVICE

- 1998 | 1996 ● **Missionary**
Church of Jesus Christ of Latter-Day Saints 📍 Czech Republic and Slovakia