

# Cavan Gray

INDUSTRIAL - ORGANIZATIONAL PSYCHOLOGIST

Chicago, Illinois

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## Professional Summary

I'm a published researcher with a expertise in R, statistical analysis, measurement and employment selection. I have experience leading domestic and international testing programs for multiple clients and guiding them through the legal and ethical landscape of psychometric testing. I enjoy taking creative approach to challenging problems and sharing research and ideas with all audiences.

## Education

### University of Georgia

PHD AND MS IN INDUSTRIAL-ORGANIZATIONAL PSYCHOLOGY

- Dissertation: Improving Organizational Research: A case for Multidimensional Item Response Theory

Athens, Georgia

Aug. 2012 - May 2018

### Western Illinois University

BS (HONS) IN PSYCHOLOGY

- Department scholar of psychology

Macomb, Illinois

Aug. 2009 - May 2012

## Experience

### Pearson VUE

ASSOCIATE PSYCHOMETRICIAN

- Lead the statistical analysis of several international and domestic professional certification exams using item response theory and classical test theory
- Identified trends using regression and correlations, presented findings and implications to clients
- Summarized analyses in technical reports and presented findings and recommendations to examination supervisory boards
- Created statistical programs to manage multiple large datasets using R and Microsoft Access for reproducible and expedited report creation
- Lead job analyses workshops and surveys to validate newly developed exams
- Conducted and presented research on improving job analysis using natural language processing and multidimensional item response theory

Chicago, Illinois

2017 - Present

### APTMetrics

CONSULTANT

- Performed a meta-analysis of employee selection tool performance across seven locations to present as expert witness testimony
- Conducted adverse impact and pay equity analyses for several Fortune 500 organizations
- Performed regression and correlation analysis to support the criterion validation of a new situational judgement test
- Developed a family of competency models using interview and survey methodology

Darien, Connecticut

Jul. 2016 - Dec. 2016

### Go Metrics

PSYCHOMETRIC CONSULTANT

- Lead the development and validation of two vocational interest inventories to be used in employee selection

Athens, Georgia

Jan. 2016 - Jul. 2016

### Frito-Lay

ORGANIZATION AND MANAGEMENT DEVELOPMENT INTERN

- Lead the analysis of human resource data for 12 jobs, over a 4-year period and 800,000 applicants. Recommendations for reducing turnover and increasing diverse applicants were presented to senior HR leaders.
- Supported an organization wide administration and analysis of an organizational culture survey and quartley pulse surveys
- Played a primary role in conducting the analyses that lead to the successful defense of an adverse impact OFCCP audit
- Developed various Excel tools using macros and complex formulae to help facilitate data collection from HR Business Partners

Plano, Texas

Jan. 2015 - Dec. 2015

### Carl Vinson Institute of Government - Survey Research and Evaluation Unit

GRADUATE RESEARCH ASSISTANT

- Supported the implementation, collection and analysis of large-scale public policy research

Athens, Georgia

Jan. 2014 - Dec. 2015

### RaceTrac Petroleum

360 FEEDBACK COACH

- Facilitated developmental 360 performance evaluations for mid-and high-level managers

Atlanta, Georgia

Nov. 2013 - Dec. 2013

# Research & Publications

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## SELECTED PUBLICATIONS

GRAY, C. J., CARTER, N. T., & SEARS, K. L. (2016). THE UWBQ-I: AN ADAPTATION AND VALIDATION OF A MEASURE OF INSTIGATED INCIVILITY. JOURNAL OF BUSINESS AND PSYCHOLOGY, 1-19.

EBY, L. T., MITCHELL, M. E., GRAY, C. J., PROVOLT, L., LORYS, A., FORTUNE, E., ALLEN, T. D., & GOODIE, A. (2014). GAMBLING-RELATED PROBLEMS IN FAMILY AND WORK LIFE: AN EXPLORATORY STUDY OF WEEKLY GAMBLERS. COMMUNITY, WORK, & FAMILY, 1-17.

## SELECTED PRESENTATIONS

GRAY, C. J., BECKER, K. A. (2018). AUTOMATING JOB TASK ANALYSIS WITH NATURAL LANGUAGE PROCESSING. PAPER PRESENTED TO THE 2017 SOCIETY FOR INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (SIOP) ANNUAL CONFERENCE, CHICAGO, IL.

GRAY, C. J., LAUTENSCHLAGER, G. J., & CARTER, N. T. (2017). IMPROVING MEASUREMENT PRECISION IN ORGANIZATIONAL RESEARCH: A CASE FOR MULTIDIMENSIONAL ITEM RESPONSES THEORY. PAPER PRESENTED TO THE 2017 SOCIETY FOR INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (SIOP) ANNUAL CONFERENCE, ORLANDO, FL.

GRAY, C. J., MORELLI, N. A., & McCLANE, W. (2015). DOES USE CONTEXT AFFECT SELECTION ASSESSMENTS DELIVERED VIA MOBILE DEVICES? PAPER PRESENTED TO THE 2015 SOCIETY FOR INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (SIOP) ANNUAL CONFERENCE, PHILADELPHIA, PA.

GRAY, C. J., CARTER, N. T., & SEARS, K. (2015). THE UWBQ-I: THE VALIDATION OF A MEASURE OF INSTIGATED INCIVILITY. PAPER PRESENTED TO THE 2015 SOCIETY FOR INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (SIOP) ANNUAL CONFERENCE, PHILADELPHIA, PA.

## COMPETITIONS & RELEVANT COURSEWORK

- 2018 Titanic Machine Learning, Top 8%
- 2018 Machine Learning, Stanford University

*Kaggle.com*  
*Coursera*