

BENJAMIN J. MARKWART

Data Scientist - Technologist - Endurance Athlete - Life Long Learner

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📍 Tucson, AZ

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EXPERIENCE

Data Solutions Analyst IV

University of Arizona Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension

📅 June 2022 – Ongoing

📍 Tucson, AZ

- Analyzed large data sets using computational models in R and Python
- Operationalized Sankey diagrams using R to visualize the migration patterns of CALES Students.
- Collaborated with cross-functional teams to improve data collection, data housing, architecture, and analyses
- Collaborated with faculty and administrative staff to implement data-driven strategies to address workforce optimization
- Developed The Epsilon Index, which is an algorithm that ranks faculty based on their research performance
- Operationalize statistical and machine learning models to predict patterns of student migration, stop-out, and course planning
- Application development to deliver specialized data visualizations to stakeholders
- Analyzed complex datasets to uncover actionable insights, identify trends, and develop predictive models.
- Develop tools and applications using the latest developments in data science, machine learning, and AI to continuously improve ALVSCE's analytical capabilities.
- Enhanced ALVSCE's Data processing capacity by developing an architecture in the SQL Server to report Instructional Workload metrics

Data Solutions Analyst III

University of Arizona College of Education

📅 May 2014 – May 2022

📍 Tucson, AZ

- Facilitated the transition of localized data into institutional data systems (PeopleSoft Uaccess Analytics)
- Developed, maintained, and created processes for institutional reporting pursuant to federal and state accreditation's
- Organized institutional data to be delivered through ODBC and SQL based reporting systems and dashboards
- Developed predictive models to enhance student learning experiences and outcomes
- Collected, processed, and cleaned large datasets from various sources to ensure accuracy and reliability.
- Developed a Maximum Likelihood statistical model to predict alumni donations
- Developed Expected Utility Model using Stata programming to identify resource optimization under RCM
- Prepared detailed reports and presentations for senior management, summarizing key findings and recommendations.
- Mined, processed and compiled institutional data from the Data Warehouse using SQL in the Enterprise Project Manager

LIFE PHILOSOPHY

"To be better today, than I was yesterday"

VALUES



Courage

Not the absence of fear but the ability to rise up in spite of it



Resilience

Adversity is an opportunity for growth and learning



Empathy

Putting oneself in another person's shoes to understand their feelings, thoughts, and motivations from their viewpoint, rather than one's own

STRENGTHS

Communication

Problem Solving

Autodidact

Enduring

TECHNICAL SKILLS

HTML & CSS & Java

R & Python

Bayesian Statistical Analysis

Microsoft 365 Suite

STATA, SAS, SPSS

SQL Server

ETL

LaTeX

Mathematica

EDUCATION

MA Political Economy

University of Pittsburgh

📅 Spring 2013

- Specializing in Quantitative Research Methods, Game Theory, and Empirical Tests of Theoretical Models
- M.A. Thesis: "Using a Bayesian Condition Logit Model to capture the Best Seats in the House: Committee Chair Selection, Partisan Politics, and Policy Expertise"

B.A. Political Science and Philosophy

University of Arizona

📅 Spring 2004

- Senior Honors Thesis: "Mitigating Multidimensionality: Unanimous Consent Agreements and their Effect on Policy Space in the United States Senate"

PROFESSIONAL EXPERIENCE CONT.

Graduate Research Assistant

University of Pittsburgh

2011-2013

Pittsburgh, PA

- Conducted advanced econometric data analysis
- Compiled data and constructed a database of judicial elections
- Constructed and implemented research designs for the empirical analysis of theoretical models.

Research Assistant

University of Arizona Arizona Health Education Center (AHEC) and the Arizona Center for Research in Therapeutics

2002-2004

Tucson, AZ

- Authored literature reviews published online for community education on the topic of health education.
- Developed logic models and statistically evaluated health education outcomes
- Assisted in health education program evaluation and assessment

Research Assistant

University of Arizona

Spring Semester 2003

Tucson, AZ

- Conducted Multivariate Statistical Analyses
- Compiled relevant literature related to Strategic Behavior with in American Institutions

TEACHING EXPERIENCE

Internship Instructor

University of Arizona Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension

Fall Semester 2023

Tucson, AZ

- Supervised Student in pursuit of a Data Science Degree
- Guided Student to compute the ϵ Ranking Algorithm and Index using R
- Supervised the development of a Python application that scrapes faculty research performance metrics off Google Scholar

Instructor

University of Pittsburgh

2011 - 2012

Pittsburgh, PA

- Course: Empirical Evaluations of American Political Process. • Drafted, administered, and graded course exams

LEGAL EXPERIENCE

Case Coordinator & Investigator

Paul, Hanley, & Harley, LLP

Nov 2006 - Nov 2010

Berkeley, CA

- Investigated toxic tort personal injury cases
- Interviewed medical and product experts
- Interviewed percipient witnesses
- Compiled case specific medical documents, diagnosing reports and expert evaluations
- Performed legal, scientific, and medical document review related to case law

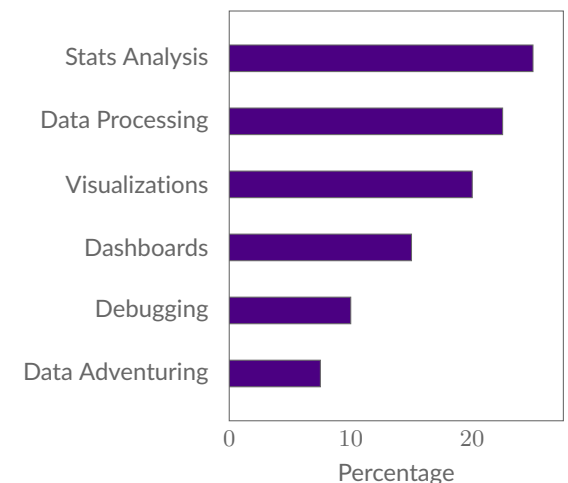
CONFERENCE PAPERS & PRESENTATIONS

- "Mitigating Multidimensionality: Unanimous Consent Agreements and their Effect on Policy Space in the United States Senate." Presented at Annual Meeting of the Western Political Science Association 2004.
- "The Democratic Institution: Trust, Mistrust, and the Implications of Political Parties." Presented Rice University Undergraduate Research Conference 2003.
- "Making Your Way Through the Maze of Student Data: An OBIEE Taxonomy for Understanding Student Data." The OBIEE UAccess Analytics Symposium 2015.
- "How do We Lead" Presentation given to the Project Management Association, Tucson, AZ 2015

GRANTS & SCHOLARSHIPS

- ϵ Implementing a New Tool for Fair and Equitable Evaluation of UA Faculty (Pending 2023)
- Recipient - Dietrich School of Arts and Sciences Graduate Research Fellowship. Aug- 2011-Spring-2013
- Grant Awarded - The University of Arizona College of Social and Behavioral Sciences Research Institute Undergraduate Research Grant. Jan-2003 - Jan-2004
- Recipient - The University of Arizona Department of Political Science Victor Bruce Kelly Memorial Scholarship. Aug-2002

A DAY OF DATA



References Available Upon Request