**Rick Guyer**

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Github: <https://github.com/guyer005>

**Summary**

Quantitative analyst with extensive experience developing code that expedites the analysis of multiple large datasets. Responsive to the needs of team members by identifying and solving the data challenges they face in real time. Valuable experience developing commercial software that required writing the documentation and providing customer support. Served on a technical advisory committee that required working with committee members and stakeholders to identify and solve problems while weighing the costs and benefits of each decision. Skilled at translating statistical results into layman terms.

**Technical Skills**

**Software: Tableau, SPSS, Microsoft Excel**

**Languages: Python, R, Git, Bash, Pascal, SQL, HTML, Java**

**Relevant Experience**

**Quantitative Analyst** at **BASIS** 2017-Current

Scottsdale, AZ

Responsible for the scoring and evaluation of multiple school assessments. Developed R and Python code to improve the efficiency of the analysis process and included full automation across subject areas. Python code reduced the data processing time while also synthesizing results from many files into a single easy-to-follow export. Served on a technical advisory committee (TAC) that provided guidance to the Arizona State Board of Education (SBE) on data related considerations with the accountability system.

*Key Accomplishments:*

* Received a letter of commendation from the Arizona SBE’s President for my service on the Technical Advisory Committee

**Additional Experience**

**Psychometrician** at **Scantron** 2015-2017

Eagan, MN

**Research Scientist** at **John Ware Research Group** 2012-2015

Worcester, MA

**Psychometrician** at **Assessment Systems Corp.** 2009-2012

St. Paul, MN

Developed software enhancements to the programs Iteman and Xcalibre using the Delphi development platform. Required a full rework of the code to modernize the user interface and the export files to include Rich Text rather than plain text. Added and integrated features at the request of customers.

**Projects**

**BASIS Assessment Platform**

* Python code designed to automate the school assessment analysis and result reporting process and increase efficiency
* Uses Pandas to process multiple datafiles (subject areas) during a single run
* Identifies changes to item order and inclusion and cleans the data before the analysis is conducted
* Performs classical item analysis and scoring using Numpy
* Rasch model (logistic) estimation of the item difficulty and ability coefficients using Scipy
* Pandas used to merge result files across subject areas to create a single export

**NBA and Machine Learning** <https://github.com/guyer005/FinalProject>

* Historical performance data for NBA teams was used in a machine learning model to predict the number of wins per season
* Cleaned and formatted data using Pandas in Python
* Sklearn used to perform regression-based machine learning

**Education**

**Data Analytics Bootcamp:University of Arizona**, Phoenix, AZ 11/2019

A 24-week intensive program focused on gaining technical programming skills in Excel, VBA, Python, R, JavaScript, SQL Databases, Tableau, Big Data, and Machine Learning.

**Doctor of Philosophy: University of Minnesota**, Minneapolis, MN 12/2008  
Dissertation focus: Evaluation of an adaptive assessment algorithm when test takers do not fit the evaluated models. R code written by the author to simulate the scoring and misfit conditions evaluated in the doctoral thesis study.