|  |  |
| --- | --- |
| Title: Associate Psychometrician | Reports to: Sr. Vice President of Assessments |
| Team: Programs | FLSA Status: Exempt |
| Location: Remote | EEO-1 Code: completed by TE |

**OVERVIEW**

The Psychometrician is responsible for the construction, maintenance, and validation of large-scale high-stakes examinations for PLTW’s courses in STEM. The candidate is expected to have advanced K-12 training, expertise and proven consulting skills in test development, measurement, and project management for examination programs.

**RESPONSIBILITIES**

* Performs analyses, replications, and/or quality reviews of psychometric analyses in calibration, equating & scaling, item and test analyses, test construction activities, and analyses for technical reports.
* Develops and/or reviews specification documents for all psychometric phases of the asset development cycle.
* Generates technical documentation and white papers suitable as contract deliverables.
* Works with all common IRT models, including 1-, 2-, and 3-PL,
* Provides psychometric consultation to the PLTW Assessment team in support of new assessment solution designs.
* Adheres to the principles of the Standards for Educational and Psychological Testing.
* Communicates results and presents findings to internal and external clients and stakeholders clearly and concisely
* Supports ongoing research efforts by developing/manipulating data sets and developing/modifying analysis code.
* Work with research team members to ensure that design and execution of research plans support, reflect, and advance the overall research agenda and organizational strategy as well as integrate across the area
* Supports relationships with research partners by developing and/or contributing to requirements for data files and specifications.
* Offer guidance in the development of complex assessment tasks
* Prototype and build measurement models for software
* Provide technical leadership deploying robust psychometric models and analytic techniques as new requirements and architectures evolve
* Prepares and/or performs in-depth quality checks on data sets and analysis code for a variety of psychometric and/or research analyses.
* Prepares metadata and statistical summaries of item banks.
* Performs analyses and creates tables and/or performs quality checks for use in publications including white papers, technical manuals, marketing collateral, and customer stories.
* Consult on customer RFP’s and contracts and represent Assessment by providing primary support for communicating current and potential capabilities and level of effort required to develop standard and non-standard solutions for securing new and existing business opportunities.
* Other duties as assigned

*Note: Nothing in this job description restricts PLTW’s right to assign or reassign duties and responsibilities to this job at any time.*

**QUALIFICATIONS**

**Knowledge**

* Ph.D. in Educational Measurement, Psychometrics, Research Methodology, or a related field
* At least three years of operational experience developing and implementing practical solutions to applied educational assessment problems and working as a Research Scientist/Psychometrician on large-scale educational testing programs
* Experience with computer software packages commonly used in psychometric work and research (e.g., SAS, R, WINSTEPS, IRTPRO, MPLUS, MS Excel)
* Knowledgeable in database and item-banking
* Knowledgeable in computer-based construction and development
* Experience with Technology-Enhanced Item development and scoring, Performance-Based Assessment, and Computer Adaptive Testing
* Experience building reports for and addressing both technical and non-technical audiences
* Experience in developing proposal responses for state assessment programs
* Ability to deliver expert solutions for real world applications
* Knowledge of Diagnostic Classification Models
* Knowledge of at least one scientific programming environment: R, Python, Stata, Matlab scripting

**Skills and Abilities**

* Excellent oral communication skills to make client presentations, facilitate committee meetings, and participate in professional organizations
* Advanced writing skills for technical reports and correspondence with clients, professional testing organizations, and project proposals
* Analytical skills to identify evaluate and solve assessment-related problems
* Teamwork skills to work in a collaborative environment with other assessment professionals and support staff
* Project management skills to effectively manage multiple project assignments, timelines, deliverables, and milestones

**WORK CONTEXT**

* Communicates regularly with colleagues and management.
* Uses computer and other electronic equipment frequently.
* Sits at desk 75% of the workday.
* Stands and/or moves about 25% of the workday.
* Legally eligible to work in the U.S.