NCSBN Examinations Department Internship Program

NCSBN is excited to offer **two** summer internship positions: a Psychometric track and a Computer Science/Machine Learning track. Applicants are encouraged to apply to one or both tracks depending on research focus. It is expected that applicants would be advanced graduate students, particularly those in the later stages of their studies in educational measurement, statistics, computer science, cognitive science, or related fields.

This eight-week program provides a unique opportunity for interns to engage in meaningful research projects that contribute to large-scale international computer-adaptive tests (CAT). Interns will gain hands-on experience with operational workflows while developing a deep understanding of the practical considerations necessary when bridging research with impactful outcomes.

Under the guidance of our staff, each intern will select a research topic that aligns with their interests and the organization's needs. As part of their collaboration, interns will be responsible for a presentation to the examinations team, along with the development of a conference submission proposal and/or a research paper for publication.

NCSBN values diversity and encourages applications from students of all backgrounds. We are committed to providing a supportive and inclusive learning environment, where interns can gain practical skills in CAT and licensure and certification exams. Detailed project descriptions will be discussed during the interview process. Interns can anticipate an engaging experience that bridges academic research with real-world applications.

Program Goal
The goal of the internships is to provide an opportunity to gain practical experiences and a comprehensive understanding of the process involved in both applied research as well as producing and delivering operational examinations. We offer the following two internship tracks:

Psychometric Track
The psychometric track provides interns with extensive operational experience that spans the entire life cycle of test development. Interns in this track will collaborate with testing professionals to learn about the development and administration of the NCLEX exams, acquire knowledge on the dynamics of a CAT exam, and engage in discussions about current measurement topics. Additionally, they will be tasked with developing a research project. We are particularly interested in detecting parameter drift for PCM model parameters, as well as other psychometric procedures to evaluate the operational polytomous items. Additional project options include, but not restricted to, the following areas:

- Polytomous item scoring and analysis
- Technology-enhanced items
- CAT Test Design
- Standard setting for innovative items
- Detecting misfitting items
- Test security
- Parameter drift for polytomous items
- Cognitive diagnostic models

Graduate students who have completed at least two years of doctoral-level coursework in educational measurement, statistics, computer science, or related fields are encouraged to apply. Applicants should

possess a fundamental understanding of both classical test theory and item response theory. All applicants should be familiar with either Python or R.

Computer Science/Machine Learning Track

This track is designed to equip interns with the necessary resources and skills to delve into complex datasets, both structured and unstructured. Interns will have the opportunity to uncover hidden patterns and insights, transforming raw data into actionable knowledge. The emphasis of this program is to gain hands-on experience in data processing, sophisticated and modern analysis techniques, and the practical application of computer science and machine learning in the realm of testing and assessment. Interns will work closely with testing professionals to learn about the intricacies of data management, analytics in a real-world setting, and valuable understanding of how data-driven decisions are made in professional contexts. Additionally, each intern will undertake an exploratory research project, allowing them to apply their learning in a focused area that aligns with their interests and organizational goals. We are particularly interested in the utility of modern natural language processing techniques, such as using generative AI or large language models to assist in evaluating free-form hand text or assist in developing and evaluating exam questions. Additional project options include, but not restricted to, the following areas:

- Test security
- Computer vision
- Natural language processing
- Latent class/cluster analysis
- Latent time-series analysis
- Data exploration and visualization
- Process/log data analysis
- Large language models

We invite graduate students currently enrolled in Masters or Doctoral programs in measurement, statistics, computer science, cognitive science, or related fields to apply for this unique opportunity. We welcome candidates from diverse academic backgrounds and stages of their graduate studies, who are eager to contribute to and learn from our dynamic program. Applicants should possess a fundamental understanding of advanced statistics and have prior experience with analyzing data with various machine learning techniques. All applicants should be familiar with either Python or R.

Duration

The 2024 summer internship will last eight weeks, beginning June 3, 2024, and ending July 26, 2024. (The eight-week internship window can be adjusted for the convenience of interns with prior approval from NCSBN.)

Location

The interns are expected to work onsite at the NCSBN office in downtown Chicago, IL.

Financial Support

This internship awards a stipend paid in semi-monthly increments of $2,500, which is equivalent to $10,000 throughout the 8-week internship period. NCSBN will also provide an additional $3,000 relocation/housing allowance, if relocation for the full term of the internship is required.

How to Apply
Interested candidates are encouraged to submit all information at NCSBN's job posting website at:
https://workforcenow.adp.com/mascsr/default/mdf/recruitment/recruitment.html?cid=03db93ed-1b1c-4447-805d-a674958c23e6&ccId=19000101_000001&jobId=480911&lang=en_US

Required Information for a submission to be complete:
- A completed application.
- A statement of interest that outlines your area of interest and experience. Your statement must include:
    1. A section detailing your previous experience and roles in projects, including specific skills developed and experiences gained (e.g., knowledge of specialized computer software and languages, analysis techniques, and/or research experience). The level of detail and specificity in this section will greatly enhance our understanding of your capabilities and suitability for the internship.
    2. A concluding section describing your ideal internship project that aligns with one of the aforementioned topics of interest. We urge you to think creatively and innovatively without being hindered by pragmatic restrictions or limitations.
- A current curriculum vitae.
- An unofficial transcript or relevant certifications that indicate your prior coursework or skills
- **Optional:** We encourage applicants to submit a writing sample (e.g., conference paper, manuscript, etc.) or a link to a git repository of any previous project.

Your statement of interest is a crucial component of the application; it should effectively communicate your relevant experiences and skills, helping us to better assess your fit for the program. We encourage you to be as specific and thorough as possible in describing your past project involvements, including your specific role on each project.

Deadline
Applicants should submit their application by February 1, 2024. Applicants will be notified of decisions by March 15, 2024.

About NCSBN
The National Council of State Boards of Nursing (NCSBN®) is an independent, not-for-profit organization through which nursing regulatory bodies act and counsel together on matters of common interest and concern affecting public health, safety, and welfare, including the development of nursing licensure examinations. Its membership comprises of the boards of nursing from 50 states, the District of Columbia and four U.S. territories. Additionally, there are also 23 associate members and five exam user members. NCSBN owns and develops the National Council Licensure Examinations (NCLEX®). The NCLEX-RN® and NCLEX-PN® examinations are computerized adaptive tests (CAT) and are used as a core component of granting nursing licenses in both the U.S. and Canada.