



Job Title	Programmer/Analyst
PVN ID	CC-2311-005968
Category	Research
Location	The CITY COLLEGE of NEW YORK
Department	Psychology
Status	Part Time
Hourly Rate	\$92.00-\$100.00
Hour(s) a Week	20.00-25.00
Closing Date	Dec 19, 2023 (Or Until Filled)

General Description

We are seeking a programmer/analyst to support the project “Towards a Framework for Algorithmic Bias and Fairness in Predicting Treatment Outcome for Opioid Use Disorder.” This role will involve developing statistical algorithms to identify and mitigate bias in treatment outcome prediction models, with a focus on biases related to sensitive attributes such as race, ethnicity, sex, and age.

The programmer/analyst will primarily engage in the development and translation of unpackaged Python code into an R package (to be published on CRAN) and packaged R code into Python scripts, while collaborating closely with R package developers. Their responsibilities include data analysis support, encompassing simulation, resampling methods, and cross-validation techniques, aiming to ensure fairness and accuracy in predictive models. This role entails analyzing model performance across various groups using ROC analysis and other metrics, with a special emphasis on addressing biases related to sensitive attributes. Moreover, the candidate will be responsible for developing and implementing algorithms currently in Python into R which balance fairness criteria with model performance, modifying existing Python code previously developed for similar contexts to fit the specific models and outcomes pertinent to this project, and writing all documentation and testing scripts relevant to demonstrate equivalent code output in R and Python.

Other Duties

The candidate is expected to provide weekly updates on their progress and participate in bi-weekly team meetings via Zoom. Co-authorship of scientific papers resulting from this project is possible and encouraged.

Qualifications

The ideal candidate will be a Python programmer with at least 2 years of experience, proficient with Python

packages such as pandas, SciPy, NumPy, matplotlib, and plotnine. They must have experience with Git and GitHub, including successful forking of existing projects, tracking issues, and using Actions for continuous integration. The candidate should be capable of working independently with minimal-moderate supervision, have introductory knowledge of R, and be comfortable collaborating with R package developers. Experience in publishing open-source software packages on CRAN is beneficial, but not required. An interest in biomedical research, especially in psychology, epidemiology, or sociology, would be beneficial.

Education: Bachelor's Degree in relevant field required, Master's preferred

Certification and Licensing: N/A

Experience: Minimum 1 year of relevant experience