

Guilford County - PennMUSA - **HR Turnover Early Warning System**  
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Guilford County ("the client") and University of Pennsylvania's Master of Urban Spatial Analytics Program ("MUSA") will collaborate on a semester-long student practicum project from January, 2022 - May, 2022. Our understanding is that the client and associated stakeholders wish to offer pro-active outreach and support to County employees in order to decrease employment turnover. However, there are limited resources to conduct these "stay interviews" and they are not presently targeted in any fashion..

The goal of this project is for a MUSA student team to create a proof-of concept analytical and informational system that will associate a turnover risk score with each employee such that the client can reach out with a "stay interview" to employees predicted to be most likely to leave their job within six months. This project will use current and past employment records, performance scores and other human resources data as the training data for a model of turnover risk.

During the months August, 2021 to December, 2021, the client will assist MUSA faculty and staff in creating a project scope for the students and assembling data sets for project use. These data can be subject to a data use agreement if necessary. The Practicum begins in the Spring academic semester (January '22). The client will provide a minimum of two consultations to the practicum students - an introductory meeting at the beginning of the semester (January '22) and a presentation at the end (May '22). However, it is desired that the client provide a limited amount of ongoing consultation to the students, which can be as much or as little as the client is prepared to offer. This will enhance both the nature of the work and the quality of the experience for the students.

Project work products include an open-source code base, a web-based application, a public presentation, and a project report. These products will be made public, but they will aggregate or obscure data as subject to any agreement.

## *About the MUSA Practicum*

The MUSA Practicum is a capstone course in the [Master of Urban Spatial Analytics](#) at the University of Pennsylvania. MUSA students study at the intersection of data science and public policy and the Practicum gives them the opportunity to work with government agencies on policy relevant issues.

The deliverables for a Practicum project include a report written for non-technical decision makers, an open source codebase and a web-based dashboard. These deliverables go on the MUSA Practicum [website](#). The primary goal of the Practicum is to provide a valuable educational experience for students and it is not a substitute for professional-quality consulting

work products. We hope the clients we work with are interested in engaging with the students, but the minimum requirements are meeting the students at the start of the semester to provide domain expertise and background on the data; and then attend the presentations in May to provide critique of the work. We look forward to working with you!