Title: ShowCase: A Data-Driven Dashboard for Federal Criminal Sentencing

Authors: Ace Vo and Mia Plachkinova

Abstract: The main purpose of the Sentencing Reform Act of 1984 was to provide more uniformity in sentencing and reduce inter-judge disparity. Subsequently, the Act created the federal sentencing guidelines to offer judges a possible sentencing range for offenses. However, since these recommendations were based on historical data, the guidelines amplified existing biases and increased inequality and disproportionate sentencing of minorities. To address this problem, we developed an artifact called "ShowCase"—a data-driven dashboard—that is grounded in penal theory, organizational context theory, social bonds theory, and triangulation notion in design theory. The artifact helps judges make fairer and more objective decisions by integrating a variety of data points. We used a design science research methodology and mixed methods to guide the development and evaluation of the proposed dashboard. Our research inquiry revealed what legal and extralegal factors contribute to more equitable judicial decisions. We also found support for integrating data science and more diverse viewpoints in the sentencing process. Our study shows that a validated data-driven dashboard can be used to promote fairness, objectivity, and transparency in the criminal justice system.