

# ANALYZING DISTRICT OF COLUMBIA SENTENCING

## Project Proposal

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Yes No  
☐ or ☒

Intellectual Property Rights Agreement Applies

☐ or ☒

Non-Disclosure Agreement Applies

# EXECUTIVE SUMMARY

## **Introduction**

The District of Columbia has historically held one of America's most racially disparate criminal justice systems. With an highly disproportionate amount of young, black men making up D.C.'s incarcerated population, questions have been raised as to how justice impacts various demographics, particularly age groups. In 2018, reforms were made to the Youth Rehabilitation Act and Incarceration Reduction Amendment Act with the hopes of reducing recidivism and allowing young adults to thrive. We aim to investigate the impacts and effectiveness of these reforms.

## **Problem**

In order to fully understand the impacts of legislation, lawmakers must know precisely how laws and reforms have impacted their constituents. After passing sentencing reforms in 2018, constituents and advocacy groups have a right to know their impacts. The problem we are aiming to solve is the lack of transparency and accountability afforded to legislative reform.

## **Objectives**

We have several main objectives moving forward with this project. First and foremost, we want to create a holistic understanding of D.C. Youth Sentencing through EDA/summary statistics. After gaining this understanding, we are going to use hypothesis testing to determine whether 2018 sentencing reforms made any changes to sentencing demographics. Additionally, we are going to investigate impacts of youth sentencing based on YRA and IRAA updates and forecast future offenses.

## **Approach**

To successfully complete this project, we will begin by using Python and R to examine sentencing datasets provided by the Criminal Code reform Commission. To provide more contextual information, we are hoping to use other public datasets describing income, age, etc. Splitting this data into pre/post-2018 partitions will allow us to conduct hypothesis testing with Python/R. Additionally, identifying traditionally juvenile crimes (such as Felony Poss. Firearm, 22DC503) will provide us with a platform to examine youth sentencing. With the goal of presenting this data to an audience with a diverse background, we will present the data in an easily accessible/consumable dashboard.

## **Deliverables**

Over the course of this semester, we will be submitting the following deliverables: 1) Summary of Hypothesis Testing and Results. 2) Data Visualizations Depicting 2014-2019 Sentencing. 3) A Dashboard/Public Resource to Present Findings

## **Costs**

Currently, we anticipate costs for this project being extremely low, if not zero. All our analyses and initial presentations will be generated and published without paid resources. We briefly discussed presenting our findings on a dashboard or independent website. Penn State sites is one option for this, but we also may need to invest in a server in order to host higher quality visualizations.

<b>Project Name</b>	<b>Analyzing the District of Columbia Sentencing of Adults</b>		
<b>Person Submitting</b>	Jordan Williard		
<b>Sponsor Authorization Signature &amp; Date</b>	_____	DATE: _____	_____
	_____	DATE: _____	_____
<b>Stakeholders</b>	Members in DC Justice Lab, Penn State's Design, Justice, and Sustainable Development Lab, DC Lawmakers, detainees of DC, the population of DC		
<b>Version, Date, Notes</b>	Version 1.1, Updated 2/19/21		

<b>Specific Project Terms, Abbreviations or Acronyms</b>	<b>Definition</b>
CCRC	Criminal Code Reform Commission, an independent agency within the District of Columbia government.
YRA	Youth Rehabilitation Act, an act that gives the court great flexibility when imposing a sentence on person whose age under 25 at the time the crime was committed [1]. This act enables the court to impose a sentence below the minimum.
VVCA Amount	The amount the defendant was ordered to pay to the Victim of Violent Crimes Act fund.
CO	Confinement, one of the sentencing types
CH Scores	Criminal History Score
IRAA	Incarceration Reduction Amendment Act
DJSD	Design, Justice, and Sustainable Development

<b>Project Description</b>
<p>The criminal justice system has been impacting an increasing number of Americans over the past several decades. Between 1972 and 2009, incarcerated populations rose 700% while crime rates have not followed in a remotely similar fashion [2]. Additionally, impacts of the criminal justice system on minors and young adults sometimes create a lifetime of hardship in part due to high recidivism, lengthy sentences, and limited support structures. In 2018, the District of Columbia enacted new Sentencing Reform. Under the mentorship of Sandra Allain and Patrice Sulton, our team will analyze how this reform has and will impact various age groups and investigate how changes to the Youth Rehabilitation Act have impacted sentencing rates and lengths. Taking notably young crimes (Felony Firearm Possession, Carjacking, etc.) as example, we aim to tell the story of DC Sentencing over the past several years. It is our hope that easily consumable analysis and data visualizations promote transparency in D.C.'s criminal justice system. This transparency will ensure that policymakers and advocacy groups find solutions that allow people to thrive.</p>

In order to accurately analyze 2018 reforms, we need to understand their extent. One major component of interest was reform to the 1985 Youth Rehabilitation Act. While novel during its initial release, the Act has not kept up with changes in protecting the future of youths. Reforms to this act aim to promote reduced youth sentencing and recidivism. Some aspects of this include enacting diversion programs, identifying reentry needs for youth offenders, and allowing for sentences lower than mandatory minimum. Additionally, reforms were made to the 2016 Incarceration Reduction Amendment Act. Reforms to this Act allow inmates to seek early release if they were younger than 18 at the time of the crime and have been incarcerated for at least 15 years.

#### Business Need and Project Goals/Outcome/Objectives

1. A visualization of DC sentencing between 2014-2019. 2. Thorough analysis of relationships between age, year, sentence length, and type of crime (violent vs. nonviolent, firearm vs. non-firearm, etc.). 3. Trends or insights that appear after the Voluntary Sentencing Guidelines reformed in 2018. 4. Any variations in the demographics regarding sentence length pre and post 2018. 5. Forecasting of future trends in youth sentencing and implications of YRA/IRAA.

#### Time Constraints, Key Schedule Milestones

We essentially have three broad tasks to undertake in order to complete our project: data collection and cleaning, data analysis and engineering, and data visualization. For us to be able to successfully finish all these tasks, we must be aware of our time constraints at hand. Working backwards, all our final deliverables need to be done by the first week of April, therefore leading to our first key milestone and biggest time constraint. We want to work on the data visualization aspect of the project 2 weeks prior to this, towards the end of March. We expect that the data analysis and engineering aspects of the project will be more time consuming, and we have set aside 3-4 weeks to finish it. Prior to that we will get the data collection and cleaning done by the end of February. In terms of smaller time constraints, we have progress reports due routinely throughout the semester so making sure that we have new and valuable updates for each one is essential.

#### Project Approach / Alternative Solutions Considered with Costs if Known (includes outsourcing or off the shelf solutions)

At this time, it seems we will be able to build all our solutions in house. Our approach consists of the following elements (in this order):

- Context: Comprehensively understand all DC sentencing reform enacted in 2018.
- Prepare Data: Collect through CCRC, clean/transform, etc.
- Hypothesis Testing: Did reforms impact youth sentencing in notable ways? Were more youth sentences distributed after reform? Were youth sentences shorter after reform? To answer these questions, we will be using Python/R to analyze sentencing of stereotypically youth crimes such as Felony Possession of a Firearm (22DC4503).
- Visualize: Synthesize our findings in easily interpretable visualizations to tell the story of sentencing reform over time.
- Present: Publish our findings on a forum/platform that is easy to share so that it can be leveraged by a wide range of users. This also includes preparing for the end of semester showcase.

If we do choose to outsource some of our solution, Dr. Rigas suggested reaching out to the Penn State Statistics Consulting Center. They will be able to guide us in the direction, or even assist with, creating valuable hypothesis tests. This will help ensure that our findings are both accurate and significant.

## Budget Information

At this time, there's not a pressing need to seek a budget; completing the project will be mostly free. We've discussed presenting our findings and visualizations on a website so that it can be more accessible. A possible technical solution is a Flask App but we will need to purchase a server (possibly Linode) at a cost of \$5-10/month.

## Success Criteria

There are several major components that are crucial to our success in this project. The first is to gather insights on changes in DC sentencing before and after 2018 reforms. More specifically, we will be analyzing how changes to the YRA and IRAA have changed the amount and length of sentences to DC youth. Complimenting this, we must also present our findings in a way that is easy to interact with and absorb. Successfully presenting our findings will consist of selecting the best visualizations to use, telling the story of DC sentencing throughout several years, and hosting them on an easily accessible medium. We also aim to determine whether gun crime will skyrocket in DC as some critics anticipated. Overall, to succeed we will determine whether DC sentencing reforms made a difference on the impacts of the criminal justice system and conveniently visualize any/all impacts.

<b>Clear Benefits to Users</b>	A clear understanding of the various impacts caused by DC Sentencing.
<b>Project Assumptions</b>	<ul style="list-style-type: none"> <li>• Data provided by dc.gov is holistic and accurate.</li> <li>• Any/all demographic data we need should be publicly available.</li> <li>• (For sake of Null Hypothesis) No change was observed in sentencing trends pre/post 2018.</li> <li>• Our visualizations will be used by users from a wide range of backgrounds.</li> <li>• Our audience will not have a contextual understanding of DC penal codes.</li> </ul>
<b>Project Manager</b>	Zhejing Shi
<b>Assigned Resources &amp; Responsibilities</b>	<p>Team Roles:</p> <ul style="list-style-type: none"> <li>• Communication Lead – Jordan Williard</li> <li>• Editor – Navya Kotha</li> <li>• Secretary – Kritika Senthil</li> </ul> <p>Resources:</p> <ul style="list-style-type: none"> <li>• Sponsorship team</li> <li>• 2018 Voluntary Sentencing Guidelines</li> <li>• Appendix D – Statistics on District Adult Criminal Charges</li> <li>• 2016 D.C. Department of Corrections Facts and Figures Presentation</li> </ul>

## Document Revision Log

Created/Modified By	Change	Date	Version
Jordan Williard	Created.	2/10/21	1.0
Jordan Williard	Modified to reflect modified scope.	2/19/21	1.1

## REFERENCES

1. Brittain, Amy, et al. "Second-Chance Law for Young Criminals Puts Violent Offenders Back on D.C. Streets." *The Washington Post*, WP Company, 3 Dec. 2016, [www.washingtonpost.com/investigations/second-chance-law-for-young-criminals-puts-violent-offenders-back-on-dc-streets/2016/12/02/fcb56c74-8bc1-11e6-875e-2c1bfe943b66\\_story.html](https://www.washingtonpost.com/investigations/second-chance-law-for-young-criminals-puts-violent-offenders-back-on-dc-streets/2016/12/02/fcb56c74-8bc1-11e6-875e-2c1bfe943b66_story.html).
2. Ghandnoosh, Nazgol, et al. "U.S. Prison Population Trends: Massive Buildup and Modest Decline." *The Sentencing Project*, 19 Sept. 2019, [www.sentencingproject.org/publications/u-s-prison-population-trends-massive-buildup-and-modest-decline/#:~:text=By%20yearend%202017%2C%201.4%20million,population%20between%201972%20and%202009](https://www.sentencingproject.org/publications/u-s-prison-population-trends-massive-buildup-and-modest-decline/#:~:text=By%20yearend%202017%2C%201.4%20million,population%20between%201972%20and%202009).
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