

**Nelson, Darcie. "Data Dashboard: Project Proposal." BIS 493 Advanced Data Visualization. Winter 2021.**

In this paper, Nelson develops a proposal for a data dashboard project. Using a data set from Law Enforcement Management and Administrative Statistics (LEMAS), Nelson explores the claim "Do the demographics of area law enforcement agencies reflect proportionally to that of the population they serve?" She includes a description of the project, a project plan outlining task due dates, background information about the data set, expected outcomes for the project, and a mockup sketch of the data interface.

My intent for including this document as an artifact is to illustrate my skill in creating a comprehensive project proposal. This proposal demonstrates my style of writing and my abilities to both conduct research and create professional-looking mockups.

**---. *Data Dashboard: Racial Demographics of Police and Population in the United States.* BIS 493 Advanced Data Visualization. Winter 2021.**

In this project, Nelson creates a data dashboard to explore the claim "Do the demographics of area law enforcement agencies reflect proportionally to that of the population they serve?" Using R (a statistical programming language), Nelson develops an interactive web-based site allowing users to explore trends in the racial demographics of local police forces and the populations they serve. She includes bar charts comparing demographics from 2007 and 2016, and scatterplots to determine if the race of the police force is representative of the race of the population.

I chose to include this project as I am really proud of the finished project. I started the term feeling a bit overwhelmed and lacking in both my R language and GitHub skills, yet I was able to overcome my hesitation and create a dashboard that is interesting, provokes thinking, and informative.

**---. "How Racial Hierarchy is Challenged in *The Letter*." BIS 372 Representation, Colonialism, and the Tropical World. Autumn 2020.**

In this paper, Nelson analyzes representations of tropical Asia using two specific scenes from William Wyler's film, *The Letter* (1940). Including references from several texts, Nelson examines the concepts of orientalism and "the Other". She analyzes scenes between a White lawyer and his Asian assistant, as well as the White main character's experience in the Chinese Quarter.

Having lived in this region for the better part of nine years, I chose this paper because I have a personal connection to the land and its people.

**---. "Socially Engaged Mapping of Home Community." BIS 218 The Power of Maps. Autumn 2020.**

In this piece, Nelson employs two distinct census data variables to generate two unique atlases of her home community. She focuses on using elements of map generalization, data classification, map symbolization and abstraction to create her finished piece. The maps highlighted a key finding indicating private high schools in the Columbia City neighborhood were populated by students overwhelmingly from "White Alone" areas, "Black Alone" areas populated public high school, and "Asian Alone" students attended both public and private high schools.

I chose to include this paper as an artifact because it showcases my capabilities in creating maps using Social Explorer as well as my abilities to think critically about maps by performing readings, analyses and interpretations of both maps.

**Nelson, Darcie, et al. *Making Wyoming Renewable*. BIS 300 Interdisciplinary Inquiry. Spring 2019.**

In this group presentation, Nelson assesses Wyoming's potential of becoming a renewable state by focusing on drawdown solutions, potential barriers, equity of impacts, and proposal feasibility. Ultimately, the team determines that Wyoming is coal and cow country, making it incredibly challenging to become a renewable state.

Completed during my first quarter at UWB, this project signifies the start of my journey in obtaining a degree in Mathematical Thinking and Visualization. I recall working with strong personalities and missed deadlines, both providing some obstacles as my role included creating the presentation, but we were able to overcome our differences and produced a great final project. Looking back, there are some items I could improve, but overall, it was a great introduction to UWB.

**Nelson, Darcie, et al. *Spider-Man vs. Batman*. B IMD 250 Introduction to Interaction Design. Winter 2020.**

In this document, Nelson incorporates the "Spider-Man vs. Batman" theme for a pop-up exhibit into a design concept report outlining the individual elements of the project. All team members contributed to the text and visuals. Nelson created a comic book-style layout for the report to add continuity with the museum design.

I included this document as a demonstration of my skills regarding layout design and balance. The cover includes title fonts reminiscent of vintage comic books and showcases the colors used throughout the report. The inside pages are clean, interesting, easy to navigate, and informative.

**Nelson, Darcie, et al. "The Impact of Internship Credits on Student Success Varies Across Schools." BIS 232 Introduction to Data Visualization. Autumn 2019.**

In this group paper, Nelson and her colleagues study High-Impact Practices data from UWB, and determine the impact one of those practices, namely internship credits, has on student success across different schools at UWB. The paper focuses primarily on the schools of IAS and Business at UWB and determining if there is a correlation between the quantity of internship credits taken by undergraduate students and their exit GPA. Visualizations produced in R indicate students taking internship credits in the school of Business had a lower exit GPA, whereas the students in the school of IAS had a higher exit GPA.

I included this document as it was the first group paper I was involved with that I thought was worthy of being published. Our team worked really well together, we all learned many new things, and we strove to do our best. I am very proud of the finished product.

**Nelson, Darcie. "Mental Mapping of Your Home Community. BIS 218 The Power of Maps. Autumn 2020.**

In this paper, Nelson develops a proposal for a data dashboard project. Using a data set from Law Enforcement Management and Administrative Statistics (LEMAS), Nelson explores the claim "Do the demographics of area law enforcement agencies reflect proportionally to that of the population they

serve?" She includes a description of the project, a project plan outlining task due dates, background information about the data set, expected outcomes for the project, and a mockup sketch of the data interface.

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In the capacity of a research assistant, Nelson explores the factors influencing childhood obesity through examining and analyzing national health databases...."

**Nelson, Darcie, et al. *Anti-Racism Project*. Dr. Charlie Collins. BIS 498 Undergraduate Research. Sep. 2019 – June 2020.**

In this paper, Nelson develops a proposal for a data dashboard project. Using a data set from Law Enforcement Management and Administrative Statistics (LEMAS), Nelson explores the claim "Do the demographics of area law enforcement agencies reflect proportionally to that of the population they serve?" She includes a description of the project, a project plan outlining task due dates, background information about the data set, expected outcomes for the project, and a mockup sketch of the data interface.

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**Nelson, Darcie, et al. *Student-made Models Analyzed on a Large Scale (SMALS)*. Dr. Caleb Trujillo. Summer 2020 – Spring 2021.**

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**---. "Proportional Symbol Mapping." BIS 498 Undergraduate Research. Winter 2021.**

In this paper, Nelson creates two maps: one displaying income inequality in the US in 1970 and 2010, with the other displaying the income inequality change in the US for the same years. Included in the paper is an analysis of the maps' spatial characteristics as well as a discussion regarding the best method to use – two symbol versus difference symbol –to visualize the changes over time.

It was important for me to include these maps as it demonstrates my skills using ArcGIS. My intention was to create two maps to be presented together, looking uniform (by using the same color palettes and fonts) yet different enough to acknowledge that they are two distinct maps.

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