

Data Science for Decolonizing Education:

Intellectual Autobiography and Plan for Concentration

I grew up receiving a very good public education in a predominantly white community in Illinois. In high school, I began to understand the value of my education and what it meant to learn the way I did—considering most people who attend public school in the US do not receive the same opportunities as me. It was not until my sophomore year of high school when I finally felt connected to and invested in my schoolwork. In a social studies class, I was told to research and write about any topic that interested me. I started learning about broader issues of inequality by researching and writing about race as a social construct, cultural imperialism, and Eurocentric impacts on beauty standards. Working on these projects was the first time I felt I had agency over my learning and explored ideas surrounding race and postcolonial theory in an academic context.

It felt liberating to realize that my education could be a space where I questioned dominant narratives. My idea of learning changed from a linear and rigid process to one that is expansive and interdisciplinary. I began to understand the idea of education as a deeply political experience—one that led me to meaningful and high-quality learning within a system that consistently fails to provide the same opportunities to others in the US. Today, I am interested in bridging these gaps by studying education through teaching and learning as well as how it is shaped by histories of power, colonialism, and exclusion. I am also fascinated by the importance of data and research in uncovering systemic

inequalities—using data science not as a neutral tool, but as a means of critically analyzing educational access. In combining qualitative methods, through historical and narrative research, with quantitative analysis, I aim to explore the concept of education as both a lived and structural experience.

Many of the classes I have taken at NYU have been formative in developing my concentration. My freshman year, I randomly stumbled upon “Presenting and Visualizing Education Data,” where I first was exposed to how data science can be used to visualize disparities in education and tell compelling, accessible stories about inequity. Last fall, I had the opportunity to be a mentor for Great World Texts, bringing Mahmoud Darwish’s *In the Presence of Absence* to a high school setting. The in-class and teaching experiences I gained were not just very rewarding or fulfilling. Great World Texts was also informative in my philosophy of education—as something that is collaborative, deeply contextual, and rooted in personal and collective histories. Teaching Darwish and bringing a Palestinian text to a public school in NYC was a powerful reminder in challenging colonial narratives. Finally, “Race, Social Justice, and Adult Literacy,” a class I took also last fall, has shaped my understanding of education beyond traditional K-12 structures. Alongside studying how adult literacy is often excluded from dominant educational discourse, I worked directly with adult learners at Youth Justice Network, an alternative to incarceration program. In this internship, I witnessed how learning is a lifelong and justice-oriented process. Literacy is not just about reading and writing, but about reclaiming voice, agency, and belonging. From working with high schoolers in the Lower East Side to students at Youth Justice Network in the Bronx, I’ve come to see how

education can be a powerful force for transformation when rooted in care, community, and critical engagement.

My interdisciplinary experiences at Gallatin has not only been incredibly liberating, but also insightful in how I think about educational institutions today. Through an untraditional approach to learning, I have become more passionate about reimagining what education can look like. My concentration is centered around this idea: reimagining educational systems through critical frameworks such as postcolonial theory and data analytics. In reading the works of bell hooks, Edward Said, Paulo Freire, and Gayatri Spivak, I have learned how colonial legacies linger in curricula, pedagogy, and language. At the same time, I have applied my data science skills to understand its importance in learning systems, such as educational success, predictive modeling, and policy-making. I believe that decolonizing education begins with redefining knowledge. In this context, data science becomes more than a technical skill—it is a tool for expanding how we understand and represent lived educational experiences. Examining these two disciplines side-by-side provokes many questions: How can data science help decolonize education? How can we use education to empower students as a tool of liberation instead of reproducing colonial narratives that enable systems of oppression?

Throughout the next two years at Gallatin, I intend to continue linking educational studies with data science. I am curious to learn more about Indigenous learning practices, challenging bias in algorithms, and how we can reclaim power over data as our world becomes consumed by one-size-fits all models in AI systems. Data traditionally tends to value uniformity and standardization, paralleling the framework of most modern

education institutions. I believe that both these structures—historically and systemically shaped by Eurocentric and Western ideas of knowledge and success—can be used as tools for empowerment when they abandon their colonial legacies. There is a humanity behind what should motivate and influence data science and conversely, research and quantitative reasoning supports efforts to humanize education and expose inequities. Additionally, I want to incorporate more global and historical perspectives in my education. I plan on completing a minor in Middle Eastern Studies and the Arabic language program at NYU, as I believe that systems of oppression are connected across global contexts. In doing so, I want to learn about how we can expand traditional notions of learning beyond the US. I hope to contribute to the development of innovative teaching methods and research that support both students and teachers in challenging inequity in schools and creating more liberatory educational practices.