**Bridging the Gap Between Academia and the “Real World”: Incorporating Data-Driven Decisions into a Fast-Paced Work Environment**

In the realm of academia, where research and creation of knowledge are the main objectives, there is often a stark contrast with the pace and priorities of non-academic work environments. As someone who transitioned from academia to a government job, I experienced firsthand the challenges of balancing thorough research with the demands of a rapid work pace. However, I found that leveraging technology and data could serve as a valuable bridge between these two worlds, and now I am pursuing an education in data science with hopes of pivoting my career towards this field.

**From Academia to the Workforce:**

My academic journey began with a focus on biology and political science, eventually leading me to pursue a graduate degree in conservation biology. Throughout my master’s program, I witnessed the meticulous planning and reliance on existing data and scholarly resources to ensure robust research outcomes. Academic settings are ideal for cultivating work that is thorough and secure, as the primary goal is to generate new knowledge. In fact, many critics of universities say that they are bubbles and don’t adequately equip students with skills and work practices they will need for a “real world” work environment. I tried my best to make sure the research I did as part of my master’s theses was as applicable to the rest of environmental conservation world as possible, but I recognize the disconnect between publishing my work in a scientific journal and its actual application into the field.

**Realities of a Fast-Paced Work Environment:**

After completing my education, I got a job in a government agency, for the New York City Department of Parks, managing tree planting contracts and designing tree planting plans for city parks and playgrounds. However, my eagerness to apply the knowledge gained from my graduate program was met with the realities of a fast-paced work environment (as well as the practical and budgetary constraints of working in a bureaucratic agency). The urgency to meet deadlines and the profit-driven motives of contractors added further pressure. It became challenging to allocate sufficient time for thoughtful work. I found myself making the best guess of the suitability of the sites I was choosing for our team to work on, sometimes only having a few minutes at a park to plan where to plant trees and which species would be a best fit for the sites. This discrepancy between academia and the work environment prompted me to seek a middle ground.

**Harnessing Technology and Data:**

Drawing from the basics of ArcGIS I learned during my master’s program, I started exploring its application to my job tasks. By utilizing GIS tools, I found more efficient ways to communicate landscape design plans with contractors. Collaborating with the GIS team in my office, we developed a web application that streamlined project sharing among contractors and other city stakeholders. This integration of technology and data offered tangible solutions to navigate the fast-paced work setting. I think there is still so much untapped potential in this agency to track the health of trees they are planting over time, suitability of species for certain site conditions, success of contractors based on tree mortality, the success of watering trees and the effectiveness of the guarantee on trees that the contractors provide of one year, etc.

**Data Science as a Transformative Skill:**

Recognizing the potential of data-driven decision-making, I made the decision to pursue an education in data science via the Flatiron School data science program. Acquiring this skill set presents an opportunity to leverage the practicality of academia in transforming my career. In my NYC Department of Parks job, I observed the reliance on basic data and metrics for project guidance such as heat vulnerability calculated by community board. However, most decisions are made based on the knowledge of tree ecology by individuals in the department and anecdotal data on which species succeed under various site conditions. However, the government and the Department of Parks as an agency collect large amounts of data which remained largely untapped for assessing effectiveness and informing future work plans. I would imagine that most companies collect a lot of data, and if there is something missing, data science has the potential to clean data and transform it in ways that are useful to the company or organization. Further, if employers become aware of the potential of using data science, they can begin to keep records of data that can be useful to find trends in the work they are doing.

**Closing Thoughts:**

Incorporating data and technology into the work environment provides a means to bridge the gap between the rigor of academia and the fast-paced demands of the real world. By equipping ourselves with data science skills, we can contribute valuable insights and leverage untapped data resources to drive informed decision-making. This integration has the potential to enhance the efficiency and effectiveness of work, ultimately transforming our careers for the better.