DSAN Scholarship 2024

Dr. Purna Gamage

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Competition Overview

Dear Students,

We are happy to inform you that we will be awarding scholarships to returning students in Fall 2024! If you are interested in applying for a scholarship, please carefully read this document and follow the instructions. You are eligible to apply if you entered our program in Fall 2023. Accelerated program students are also eligible to apply.

Competitiveness

- Scholarships will be awarded on a competitive basis, will be judged by a group of faculty, and will be anonymous.
- By submitting a complete application, you become eligible. Not all applicants will be awarded scholarships.
- For fairness and uniformity, it is not permitted to ask any questions of any kind to anyone.
- All instructions are contained in this document and in the links included herein.

Due Date

- The deadline to submit all required materials via the form is **Thursday, May 16th, 11:59pm EDT**.
- It is not possible to be late or to resubmit. It will not be possible to edit a submission. It is not possible to ask questions from anyone.

> ⚠ LLMs and Generative AI Policy
>
> Do not use large-language model tools, such as ChatGPT, to create any of your content. Doing so will disqualify you from the competition.

Submission

You can review the submission form anytime you wish so that you can see everything that is on it. So, it is OK to click this link and to review this form as many times as you wish. However, you can submit only once. Do not submit until you double check everything and are 100% ready. It is NOT possible to resubmit or to submit more than once.

You must sign in via your Georgetown account to access these links. If you have any access issues, be sure you are properly logged into your Georgetown email and, if asked by the browser, that you log in with DUO.

(You can review and read this form without submitting and it is a good idea to do so. Do not submit the form until you are ready. It is NOT possible to submit more than once.)

You will be submitting a URL to your project.

Anonymity

- When you submit, you will use ONLY your NetID. DO NOT place your name anywhere on your site (you can still use your Georgetown domain), your submission, etc.
- The review committee will review each submission without knowing who submitted it.
- The review committee will vote and will select the top winners. Those winners will be awarded scholarships.

Instructions

Everything you need to know is in this document.

This is all the information that is available. Read and click everything. It is not permitted to email me or anyone else to ask any questions. Part of this process is one's ability to interpret and to follow directions.

As a successful Data Scientist, you should be able to provide a project analysis without any supervision or with minimal supervision. Creativity is the key!

You must determine how best to use the datasets to tell your story. You will determine how to clean, prepare, analyze, explore, and tell your story. The project provides students with the opportunity to go "above and beyond" and exceeds the expectations.

Goals and Objectives

The goal of the mini-project is to create a story about this dataset using as many Data Vizes as possible. Your story must be online along with your visualizations, etc.

You will submit your mini-project as a URL.

Hint: This is a *mini-Data Viz-Project* . Therefore, please do not include 100 pages of analysis. Make it more visual.

Again, this process is competitive and anonymous. You will be competing against each other. The best stories combined with the best application responses will win. This is individual. If submissions are too similar they will be removed and disqualified.

Again, It is not possible to email questions, to ask questions, to resubmit, to upload twice, or to be late.

There are no further requirements or instructions. You have the data. Your goal is to create an amazing story.

Visualization and interactive visualization are always a critical part of any story. Evaluation will include: Look, Feel, Usefulness, Creativity, Interest, Flow, Clarity, Navigation, Writing & Grammar, Information Communication, Valuable Conclusions, Introduction, Uniqueness, etc.

GOOD LUCK!

Best,

Director Purna

Project Overview

This data visualization project entails crafting a compelling story about the dynamics of **vegetation cover** in relation to **climate change** using data from the US Geological Survey (USGS).

Specifically, students should start by familiarizing themselves with the USGS's historical data on the Natural Bridges National Monument (NBNM), which can be downloaded from this page. The relevant data file from this page is contained in the compressed file `NABR_ClimExposure.7z`, which you can also download directly from the Data Sets and Description Google Drive folder (accessible to all `@georgetown.edu` email accounts).

Students should then conduct exploratory data analyses, generate interactive visualizations, and distill insights on topics such as vegetation resilience, climate impact trends, and ecological sustainability.

The project will culminate in a succinct, visually engaging, web-hosted report, **showcasing the findings** and **offering recommendations**. Projects will be judged based on creativity, clarity, and the effectiveness of communication, with an emphasis on visual storytelling and user engagement.

Requirements and Guidelines

- Objective: Develop an in-depth data visualization project analyzing the impact of climate factors on various vegetation types across different seasons using NOAA's climate data for the Four Corners region.
- Data Sources:
  - Climate and Drought Data from NOAA
  - Vegetation Cover Data linked to geographic and temporal variables
- Narrative Approach: Utilize comprehensive data visualizations to craft a narrative that emphasizes visual storytelling over extensive written analysis.
- Hosting: Present the project on an accessible website (georgetown domains or github).
- Submission: Submit the project via a URL link.
- Project Nature: This should be an individual, competitive, and anonymous project.
- Ethics: Avoid plagiarism and duplication of other's work. This includs use of large language models and automated data analysis tools. Please cite resources and the web links of every code used and cited.
- Submission Policy: Late or multiple submissions will not be accepted.
- Evaluation Criteria: Projects will be evaluated on visual aesthetics, interactivity, innovation, user experience, clarity of content, and originality.

Data-Driven Narratives

Creating a data-driven narrative involves merging statistical analysis with storytelling, presenting complex data through visuals and narratives to uncover patterns, answer questions, and influence decision-making. This narrative transforms raw data into a captivating, understandable story for a broad audience.

Project Components

1. Data Acquisition: Download the relevant climate and vegetation datasets from NOAA and other pertinent sources.
2. Data Preparation: Clean and preprocess the data to handle anomalies and combine datasets to form a holistic view of the climate-vegetation interaction.
3. Exploratory Data Analysis (EDA): Conduct preliminary analyses to identify trends, distributions, and correlations between climate variables and vegetation cover.

4. Visualization: Develop interactive visualizations to display the geographical distribution of vegetation, trends over time, and correlations with climate variables.
5. Insight Generation: Analyze visual data to derive insights about the impact of climate variables on vegetation, identifying patterns of resilience and vulnerability.
6. Reporting: Assemble a comprehensive report or dashboard presenting findings and visualizations, along with interpretations and recommendations for stakeholders such as ecologists, conservationists, and policymakers.