**Project 2 Topic Proposal:**

**Understanding Capital Bikeshare Usage, October 2024**

*Research Topic:* The purpose of this project is to gather insights on Capital Bikeshare usage in Washington, DC and create a model to determine which user variables and trip characteristics most influence usage patterns.

*Introduction:* Capital Bikeshare is a bicycle-sharing system that serves Washington, D.C., and certain counties of the larger metropolitan area in both Maryland and Virginia. Users can select from electric or classic bikes at over 700 locations, either as a casual rider or with a monthly membership.

*Proposed SMART Questions:*

1. What is the frequency of electric bike versus classic bike rentals?
2. What is the distribution of duration rides on electric bike versus classic bike?
3. What is the distribution of distances ridden on electric bike versus classic bike?
4. What is the frequency of user types?
5. What are the neighborhoods with Higher Trip Frequency?
6. Understanding the User Type Distribution for Registered Member and Casual Rider?

*Modelling Questions:*

1. To predict if a rider is a registered member or a casual rider based on trip characteristics.
2. To predict the duration of the ride based on trip characteristics and type of rider.
3. To predict the type of bike used based on trip characteristics.

*Data Source:* The data is from <https://capitalbikeshare.com/system-data> andis provided according to the [Capital Bikeshare Data License Agreement](https://www.capitalbikeshare.com/data-license-agreement). The source dataset consists of about 700K observations over 13 attributes, where each observation represents a single ride.

*GitHub repo:* https://github.com/Anusha-raju/Capital-Bikeshare.git

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