Data Science Approach to NOAA Stakeholder and User Experience (UX) Survey and Feedback

CESSRST Advisors/Mentors

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Rationale (So what and who cares!)

In accordance with Executive Order 12862, the Federal agencies should be customer driven and make sure their customers are satisfied with the services and products they are receiving, and whether they have suggestions as to how the services and products may be improved or made more useful. The information will be used to improve their products and services.

How much data is produced by NOAA

How much is available - sources

Why there is a need to do such a user-experience surveys - [NESDIS Strategic Plan and TPIO)

https://www.archives.gov/files/federal-register/executive-orders/pdf/12862.pdf

Project Objectives

- To determine the strategic outreach and engagement of the NOAA community with the users, to better understand their data needs.
- To develop/design research and participatory surveys by the summer interns/students for the NOAA stakeholders and user community
- To better understand NOAA's expectation of their external stakeholders' needs, to help identify data information gaps, if any
- To better understand users' access and usability of the (NOAA's) products and services
- To provide student interns with technical skill-sets to better understand NOAA's mission-driven priorities and to help create their NOAA mission enterprise profession careers

Methodology

- Design/Create survey for various identified groups/participants.
- Each group of participant(s) will have separate sets of survey questions, e.g.:
  - Qualitative (Voice Converted to String > Analyzed using Data Model)
  - Quantitative (output will be Statistically Analyzed)
- Finalize the survey questions in coordination with the Mentors/Advisors
- Selection of survey participants from various groups (e.g. NOAA leadership, Research community, students, public)
- Setting-up 30 Minutes Zoom Call with each Individual and/or group of participants(creat an advanced Google Calendar)
- Preparing for interview sessions > Each Students will be prepped on how to conduct such interviews and ask the questions, and complete the session within the allocated time (skills gained - communications, time management and project.
- Convert audio data to transcript (Apply automatic method)
- Statistically Analyze qualitative Answers
- Text analysis of strings (Voice converted) to determine the importance of words.
- Develop a report/short paper, and present at the end of summer symposium

Call and Recording - Project Timeline

Literature Search (NOAA Library) - June 20 through July 2, 2021

Design and finalize the survey questionnaire - July 3- July 9, 2021

Virtual Surveys to be completed - (July 10 through July 25, 2021

Analyse the survey data: (July 25 through August 5, 2021)

Poster/Video prep for summer symposium August 6 - August 8, 2021

Presentation - Symposium - August 9, 20201

Anticipated Results and Conclusions

- Students will gain better understanding of NOAA and its science and social science missions
- Students will gain technical skills related to data science and data analysis
- Students will also gain other skills such as team building, critical thinking, leadership and communication skills, through peer-based learning approach
- Create a technical handbook/report that can be used by the stakeholders as a guidance manual