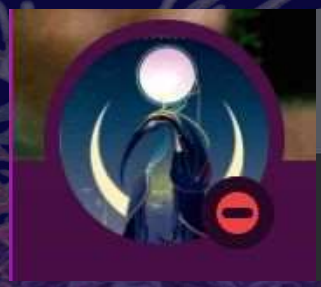
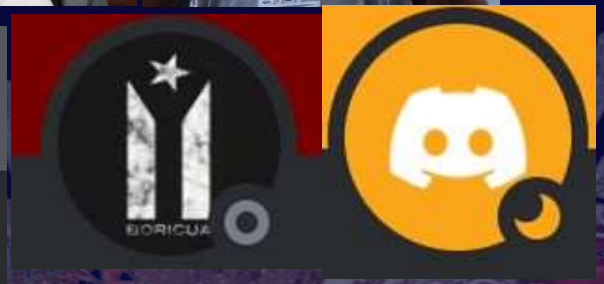

Sonar Skills
SC22
3rd Annual Hackathon!
HPC IN THE CITY: DALLAS
NOVEMBER 3-7, 2022
HackHPC.github.io/HPCintheCity22

Sonar Skills





Crew Members:

- Tahmuras Pirimov
- Andrianina Raharijao
- John Cabrera
- Jonathan Kurtz

Deck Officers:

- Hector Santiago
- La Tasha Robert
- Geoffrey Reid

The issue at hand:

To ensure their suitability for the program, students take rigorous competencies tests, along skills assessments in order to get into the Sonography program at Austin Community College.

Despite this, only 14 out of the 24 admitted students actually make it through the program and graduate. That is a **58%** dropout rate! This puts the effectiveness of those tests into question...

Our solution:

Investigate the effectiveness of those skill assessments through the use of the student's score on categories in the exam and their actual in the program during a semester.

Tools used:

- Python (Sklearn, Pandas)
- HTML, CSS, Javascript
- Google Cloud Platform
- Cloudy Cluster
- Jupyter NoteBook
- Excel




Our results:

We fed the data for a cohort of student to a linear model to observe if there was any noticeable trends between any specific measured qualities in the skill assessment and the student's finals grade. We showed our findings in this Dashboard.

Impact:

We hope our project will give the Health Sciences Information and Admissions Office at the Austin Community College a better insight into what factors in the pre assessment evaluation best predicts a student's success in the sonography program.

Further work:

More in depth observation, such as whether or not success in a specific class is a strong indicator of future success, or looking into which classes causes students to drop out of the program. We also want to improve the dashboard's UI with interactive graphs made in javascripts.

What we learned:

- Using Jupyter NoteBook
- Opening Jupyter Lab on Cloudy Cluster
- Hosting a webpage on the Google Cloud Platform
- Pandas, Linear regression.
- Data wrangling

Acknowledgments:

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