

Data Science CTW Project Reflection

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In our project proposal we said we wanted to build a website to give users a more interactive way of learning the importance of sleeping. And we did build a [website](#) with Node.js.

On the first page of the website user is asked for demographic information(including sleep data). In our previous iteration we were using a random forest model to predict user's sleeping habit but the accuracy wasn't high enough. Then we had a discussion about it and made a design choice to search in the data for people with same demographic statistics and output their average sleep since this method is more accurate, straightforward and efficient.

After the user types in all the data, he is redirected to a result page where he's shown the percentile of his sleep habits in the demographic and various graphs based on his statistics. Depending on whether the user is sleep-deprived or over sleep, he will see some articles from New York Times(we got the data from its web api) about the harm of little sleep or over sleep. Also, we built a discussion group app for users with similar habits to communicate and share stories. There are two groups, one for the sleep-deprived and one for the over-sleep, one of them will show up on the result page depending on the user's statistics. And because we want our website to have some social network function, each user is asked to sign in with Facebook at the beginning and their name will show in the discussion group.

One other work we did in this project was setting up a python server with Flask and made it talk with the Node.js server since python scripts won't run on the backend of a Node.js website. So we hosted our data science scripts separately with our website server.

I think our website has a potential to change the world as it raises people's awareness about the importance of good sleeping habits. Also the social function in our website provide a platform for people around the world with similar lifestyle to meet, connect and share their stories.

We think we both achieved our personal learning goals. We wanted to learn more about website development as well as data visualization at the start of the project and we did learned a ton throughout the way. We think this project is a success as it not only hones

our skills on web-dev but also arises our attention to the importance of keeping a good sleeping habits. One of the team members now goes to sleep before midnight everyday and gets up before 7:30.