I would be excited to present a lecture on the fascinating topic of probability and statistics and how they impact our daily lives. The lecture would begin by providing a brief overview of the foundational elements of probability theory, including key concepts such as independent events, conditional probability, and Bayes' theorem.

We would go over the importance of appropriate visualizations, and how they can help us make better sense of the data.

Then, we would delve into real-world applications of probability and statistics that many people encounter on a regular basis, but may not realize the underlying principles at work.

Some examples may include:

- Probability in games of chance: Showcasing the probabilities involved in games such as rolling dice, flipping coins, and drawing cards. It could be a fun visual way of introducing them to the basic concepts.

- Probability in sports: Sports are something that likely a lot of students will be interested in. We could discuss how statistics are used to evaluate the players and make strategic decisions in games.

- Medical statistics: We can discuss how researchers use statistical analysis to evaluate the effectiveness of treatment, identify risk factors for diseases, and make predictions about patients' outcomes. We can also talk about how information collected from real-world samples can be used to model the future spread of disease.

- Social media and big data: We can discuss how companies use information collected about users to personalize ads, recommends products/videos/books, and predict user behavior.

- Other examples could include weather forecasting and financial modeling.

Providing a wide range of applications and examples increases the chances that every student will find at least one interesting, and will remain reneged throughout the lecture.

We would discuss how probability and statistics help us make informed decisions and predictions, and how they play a crucial role in many industries and fields. I would aim to make the content accessible to a general audience, while also providing external resources for an interested audience with a more technical background. Overall, my goal would be to share my passion for probability and statistics and demonstrate the practical relevance of this exciting field.