[Slide 1 – cover slide]

## Hi. I’m [Insert Your Name] and I’m here to tell you about Statistics: The hottest career of the 21st century!

To complete my self-introduction, I am a [Select One: statistician/biostatistician/other title] with [Insert Company Name].

Now, let’s take a closer look at the field of statistics.

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What is statistics? It’s not what you think it is.

* People think statistics is about crunching numbers.
* They imagine someone in a cubicle working alone on a spreadsheet.
* Or someone doing plug-and- chug math. But those descriptions are just not accurate.
* So, what is the truth, you ask?
* Statistics is a big, important and growing field. In fact, it’s a science…the science of learning from data. And as data has become more prevalent and important in our world, so has the field of statistics.
* Today, I’m going to dispel the myths about statistics, and show you why it’s one of the most interesting, exciting and rewarding careers of the 21st century.

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Why should you care about the field of statistics?

Because it offers tremendous opportunity for graduates. For instance, did you know:

* Statistical analysis was the most in-demand skill in 2014 according to LinkedIn?
* It is among the fastest-growing jobs? In fact, the McKinsey Global Institute predicts there will be a shortage of up to 190,000 people with the data analysis skills to work with Big Data by 2018.

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* Statistics also attracts a large number of women. More than 40% of undergraduate and graduate statistics degrees are awarded to women, the most of any of the quantitative sciences (e.g., math, engineering, computer science, physics, chemistry, …). Recently, CareerCast ranked statistician as a top job field for women.
* *Fortune* magazine ranked statistics as the top graduate degree based on salary, growth and job satisfaction.
* Those with statistics training have a wide variety of career fields from which to choose. I’ll discuss more about this in a moment.
* Statistics is an indispensable part of the scientific discovery process. Famed mathematician and biometrician Karl Pearson called statistics “the grammar of science.”

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* When I talk with other statisticians, I often hear they entered the field of statistics because it offers interesting and exciting work in diverse areas.
* It also offers many opportunities to make a positive difference.
* Don’t take my word for it. Listen to these seven young and accomplished statisticians talk about their jobs and why they got into statistics:

[play video titled “Why Study Statistics?”]

#### [slide 6]

#### The popularity of statistics also is growing on college campuses across the U.S.

#### *Fortune* magazine recently reported that it’s one of the fastest-growing STEM majors. Since 2003, the number of schools granting undergraduate statistics degrees has increased from 74 to more than 110 in 2013.

#### But even with this growth, it’s not enough to meet the outsize demand for people with data analytics skills.

#### And that leads us to another reason to study statistics: Money!

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* A degree in statistics offers a great return on investment.
* Mean annual salaries are strong. According to the Bureau of Labor Statistics (BLS), mean annual salaries of all statisticians is $83,000. Mean annual salaries for data scientists with less than three years of experience is $80,000, and $150,000 for those with nine or more years of experience, according to a [Burtch Works 2014 report](http://www.burtchworks.com/files/2014/07/Burtch-Works-Study_DS_final.pdf).
* Add to this the fact that statistics jobs are growing much faster than the average—27 percent between 2012 and 2022—and you can see why employers want and need talented new statisticians, according to BLS.

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* We’ve covered some reasons why statistics is a good career.
* But let’s get a better understanding of what statisticians do.
* First, what *is s*tatistics? People define it many different ways, but in short, it’s the science of learning from data.
* Statisticians turn data into knowledge, detecting signal from the noise in the data.
* They design experiments and devise questions to best determine how to obtain the desired data.
* They do this in a variety of fields and disciplines—from medicine and health care to sports and the environment—to name just a few areas.
* Now, let’s look at a few examples of their work.

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Statisticians work in the field of ecology and environmental science.

They help manage the earth’s natural resources and understand the impact of climate change.

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Statisticians work in medicine and health care for pharmaceutical companies, health care companies, government and private research institutions to reduce disease and improve medicine and treatments.

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Statisticians have become increasingly important in professional sports. They make teams more competitive with better draft picks and analyzing the tendencies of opponents.

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Statisticians work throughout politics and government.

For example, they improve voter targeting for a presidential campaign or assess the success of government programs and policies for a government agency or a policy organization like the Brookings Institution.

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Statisticians help international organizations and governments reduce abuses of human rights and war crimes.

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Statisticians advance machine learning, speech recognition and artificial intelligence.

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Statisticians help industries improve efficiency in business processes and financial institutions identify risk and opportunity.

Most of you likely aren’t aware that statisticians help power Internet search engines like Google and Bing.

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* Statistics also is a great field for women.
* There have been several articles documenting this recently:
	+ The [Washington Post](http://www.washingtonpost.com/local/women-flocking-to-statistics-the-new-hot-high-tech-field-of-data-science/2014/12/19/f3e2e486-62ed-11e4-9fdc-d43b053ecb4d_story.html) reported in late 2014 that women are “flocking to statistics.”
	+ [Fast Company](http://www.fastcompany.com/3044934/strong-female-lead/why-are-these-3-stem-fields-dominated-by-women) wrote in April 2015 that statistics is one of three STEM fields that attracts a large share of women.
	+ The [Chicago Sun Times](http://chicago.suntimes.com/news/7/71/333208/data-mining-science-attracting-women) reported in March 2015 about the exciting and important work women are doing in the field of data science.

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## If you don’t want to be a statistician, you’ll still benefit greatly from taking statistics classes in college, regardless of your major. That’s because more and more career fields need workers who are statistically literate, especially in our growing data-driven economy, such as:

* Marketing
* Business and finance
* Medicine and healthcare
* Data Science
* Journalism
* Communications and public relations
* Government and public policy

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## So, what are you waiting for? Think it’s worth studying statistics in college? If so, here are a few options for you to consider:

* At a minimum, take at least one course in statistics. It will give you an edge no matter your career goals.
* Consider minoring in statistics. It will boost your job prospects in our increasingly data-centric world.
* If you like everything you’ve heard today, consider pursuing a degree in statistics.

Thank you for your time and attention. I’m ready to answer your questions about statistics career opportunities.