



MASTER OF SCIENCE IN

# ENGINEERING DATA SCIENCE



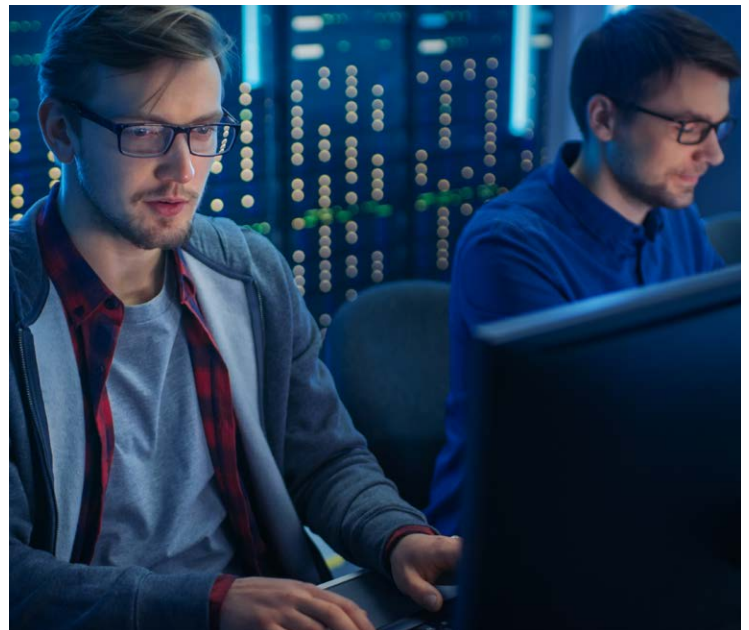
RESEARCHCOMPUTING.EGR.UH.EDU

## *HARNESSING THE POWER OF BIG DATA*

### WHAT IS ENGINEERING DATA SCIENCE?

Data science is poised to play a vital role in research and innovation in the 21st century. Google, Facebook, Amazon, and Youtube are just some prominent examples which highlight the increasing impact of data science in our day-to-day life. The singularity which will facilitate the transition of our modern society to a science fiction-esque one is on the cusp of being realized due to the so-called *data revolution*, especially in the field of engineering.

Engineering Data Science is a broad field that encompasses predictive modeling and data-driven design of engineering systems. Applications range from health sciences and environmental sciences, to materials science, manufacturing, autonomous cars, image processing, and cybersecurity.







## WHY THE UNIVERSITY OF HOUSTON?

The demand for graduates with a data science background is already high and is growing rapidly across a wide range of industries worldwide. Houston, being the energy capital of the world as well as the home of a thriving healthcare industry, is also seeing a persistent demand for workforce well-trained in data science. To provide state-of-the-art training for a data-centric workforce, the Cullen College of Engineering offers a Master of Science in Engineering Data Science.

## ABOUT THE PROGRAM

The Master of Science in Engineering Data Science at the University of Houston is a non-thesis, 10 course graduate curriculum program. A four-year bachelor's degree in engineering or an engineering related field is required in order to apply for the Engineering Data Science program. The curriculum is comprised of three primary categories. These courses are available online and face-to-face in a classroom setting

## SAMPLE CORE CLASSES

**ECE 6397** Introduction to Data Science  
**COSC 6397** Introduction to Data Mining and Machine Learning  
**MATH 6383** Statistics  
**COSC 6323** Statistical Methods in Data Analytics

## SAMPLE ELECTIVE COURSES

**COSC 6339** Big data analytics  
**ECE 6397** Signal processing and networking for big data applications  
**ECE 6397** Embedded systems and the internet of things  
**MATH 5386** Regression and linear models

