



RESILIENCE IN PANDEMICS

DATA AND DIGITAL INFRASTRUCTURE FOR INFORMED DECISION- MAKING

Jennifer Pazour, PhD
Rensselaer Polytechnic Institute

Jessilyn Dunn, PhD
Duke University

As if we needed a reminder...



COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)



Last Updated at (M/D/YYYY)

9/18/2021, 4:21 PM

Total Cases

227,939,234

Total Deaths

4,683,711

Total Vaccine Doses Administered

5,880,788,770

28-Day Cases

16,707,772

28-Day Deaths

263,828

28-Day Vaccine Doses Administered

934,907,662

Cases | Deaths by

Country/Region/Sovereignty

US

28-Day: 4,299,398 |

44,525

Totals: 42,038,402 | 673,306

India

28-Day: 1,024,104 |

10,565

Totals: 33,417,390 | 444,529

United Kingdom

28-Day: 946,374 | 3,509

Totals: 7,435,493 | 135,478

Iran

28-Day: 779,497 | 15,626

Totals: 5,408,860 | 116,791

Turkey

28-Day: 617,010 | 7,045

Totals: 6,794,670 | 61,140

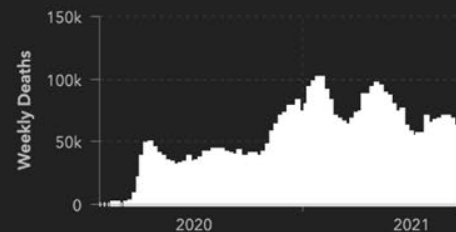
Malaysia



Esri, FAO, NOAA

STATISTA

Powered by Esri

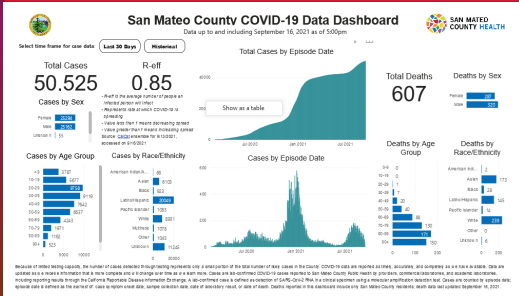


The background features a vertical gradient bar on the left side, transitioning from white at the top to light green at the bottom. To the right of this bar, there are several overlapping, semi-transparent shapes in shades of pink, purple, and orange, creating a soft, abstract effect. The main text is positioned on a solid black background to the right of these shapes.

How to Make Critical Decisions in the Face of Uncertainty?

Engineers can help by:

Designing Digital Infrastructures



to collect data needed for informed decision making

Processing, Analyzing, and Transforming Data



to better understand and to better communicate decision trade-offs

Driving Data-Informed Decision Making

so that individuals and organizations can make better informed decisions in the face of uncertainty



Today's talks:



Peter Frazier, PhD

Eleanor and Howard Morgan Professor
Operations Research and Information
Engineering
Cornell University



Samantha Keppler, PhD

Assistant Professor of Technology
and Operations
Stephen M. Ross School of Business
University of Michigan

Tomorrow's talks:



Sarah Nielsen, PhD

Director of Process Science
Janssen Pharmaceuticals



Karen Hicklin, PhD

Assistant Professor in Industrial &
Systems Engineering at the
University of Florida