DS Awareness, Readiness and Aspirations Survey - Posttest

Q1
Welcome to The Research Study!

Title of Study: Targeted Infusion Project: Infusing Data-Centered Pedagogy and Data-Analytical Skills in Introductory Statistics

Purpose of Study: This study aims to redesign the Introductory Statistics course at NCA&T to enhance students' understanding of fundamental statistical concepts, train students to think structurally with data and make data-informed decisions, and attract and prepare students to pursue data science education and/or careers. In order to conduct this research study, we need to collect data from the NCA&T students enrolled in the Introductory Statistics course about their data science awareness, readiness and aspirations.

Confidentiality: This study has been approved by the Institutional Review Board at NCA&T. Any information that is obtained in connection with this study and that can be identified with you will remain confidential. Your anonymized data will be used only by the study investigators and all results will be reported in aggregate form so that no individual student can be identified.

Your decision whether or not to participate will not affect your performance in the course or your relationship with NCA&T in any way. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions about this study, you may contact the Principal Investigator (Dr. Sayed Mostafa) at (336) 285-3104 or via email at sabdelmegeed@ncat.edu. If you have any study-related concerns or any questions about your rights as a participant in the study, you may call the Office of Research Compliance and Ethics at North Carolina A&T State University at (336) 285-3179 or email rescomp@ncat.edu.

The survey should take you about 10 minutes to complete.

By clicking the button below to start the survey, you acknowledge that   Your participation in the study is voluntary,   You are 18 years of age or older, and   You are aware that you may choose to terminate your participation at any time for any reason.

Q2 Consent:

○ I voluntarily consent to participate in this study (1)

○ I don't consent to participate in this study (2)

Q3 I am

○ Female (1)

○ Male (2)

○ Non-binary / third gender (3)

○ Trans man (4)

○ Trans woman (5)

○ Prefer not to say (6)

Q4 Are you of Hispanic, Latino, or Spanish origin?

○ Yes (1)

○ No (2)

Q5 How would you describe yourself?

○ American Indian or Alaska Native (1)

○ Asian (2)

○ Black or African American (3)

○ Native Hawaiian or Other Pacific Islander (4)

○ White (5)

○ Other (Please tell us how you identify yourself) (6)
_____

○ Prefer not to say (7)

Q6 I consider my family

○ Working class (1)

○ Lower middle class (2)

○ Middle class (3)

○ Upper middle class (4)

○ Wealthy class (5)

Q7 What is your class standing?

○ Freshman (1)

○ Sophomore (2)

○ Junior (3)

○ Senior (4)

Q8 Have you taken AP (Advanced Placement) Statistics in high school?

○ Yes (1)

○ No (2)

Q9 I have taken the following college-level math courses before (select all that apply)

☐ MATH 101 (Fundamentals of Algebra and Trigonometry I) (1)

☐ MATH 102 (Fundamentals of Algebra and Trigonometry II) (2)

☐ MATH 103 (College Algebra and Trigonometry for Eng. and Sci I) (3)

☐ MATH 104 (College Algebra and Trigonometry for Eng. and Sci II) (4)

☐ MATH 110 (Pre-Calculus for Eng. and Sci) (5)

☐ MATH 111 (College Algebra and Trigonometry) (6)

☐ MATH 112 (Calculus for Business and Tech) (7)

☐ MATH 131 (Calculus I) (8)

☐ MATH 132 (Calculus II) (9)

☐ STAT 214 (Intro to Statistical Reasoning) (10)

☐ Other (Please specify) (11)

_____

☐ ⊗None (12)

Q10 What is your major? (Please type in the space)

_____

Q11 Is MATH 224 required for your major?

○ Yes (1)

○ No (2)

○ Not sure (3)

Q12 What career do you plan to seek after graduation? (Please type in the space even if you think you may change your career later prior to graduation)

_____

Q13 Have you ever heard about a field of study called "Data Science"?

○ Yes (1)

○ No (2)

Q14 If you heard about Data Science before, where did you hear about that field?

   ○ In one of my classes (Please specify) (1)

_____

   ○ In a special campus lecture / event (Please specify) (2)

_____

   ○ From a professor outside of class (3)

   ○ From the news (4)

   ○ Other (Please specify) (5) _____

Q15 Have you ever taken a course in Data Science?

   ○ Yes (1)

   ○ No (2)

Q16 Are you aware that NCA&T offers courses in Data Science?

   ○ Yes (1)

   ○ No (2)

Q17 Are you aware that NCA&T offers an undergraduate certificate in Data Science?

   ○ Yes (1)

   ○ No (2)

Q18 Are you aware that NCA&T offers degrees with concentration in in Data Science?

○ Yes (1)

○ No (2)

Q19 A Data Scientist is someone who (Select all that apply)

☐ Has programing skills (1)

☐ Has statistical skills (2)

☐ Has expertise in some domain / field (e.g., Biology, Physics, Technology, etc.) (3)

☐ Can tell a story based on data (4)

☐ Can analyze big data (5)

☐ Other (Please specify) (6)

_____

☐ ⊗ Don't know (7)

Q20 What major do you think you need to have to become a data scientist? (You can choose more than one major)

- [ ] Computer Science (1)

- [ ] Mathematics (2)

- [ ] Statistics (3)

- [ ] Biology (4)

- [ ] Physics (5)

- [ ] Chemistry (6)

- [ ] Psychology (7)

- [ ] Sport Science & Fitness Management (8)

- [ ] Family & Consumer Science (9)

- [ ] Animal Science (10)

- [ ] Agricultural & Environmental System (11)

- [ ] Environmental Health & Safety (12)

- [ ] Food & Nutritional Sciences (13)

- [ ] Electronics Technology (14)

- [ ] Information Technology (15)

- [ ] Engineering (16)

- [ ] Other (Specify) (17)

_____

☐ ⊗ Any major (18)

☐ ⊗ Don't know (19)

Q21 Where do you think data scientists can work? (Select all that apply)

☐ Google (1)

☐ Facebook (2)

☐ Twitter (3)

☐ Amazon (4)

☐ Microsoft (5)

☐ Academia (Colleges and Universities) (6)

☐ Government (7)

☐ Other (Please specify) (8)

_____

☐ ⊗ Don't know (9)

Q22 About how much is the average annual salary of data scientists?

○ $40,000 to $50,000 (1)

○ $50,000 to $60,000 (2)

○ $60,000 to $70,000 (3)

○ $70,000 to $80,000 (4)

○ $80,000 to $90,000 (5)

○ $90,000 to $100,000 (6)

○ $100,000 to $110,000 (7)

○ $110,000 to $120,000 (8)

○ $120,000 to $130,000 (9)

○ $130,000 to $140,000 (10)

○ $140,000 to $150,000 (11)

○ More than $150,000 (12)

○ Don't know (13)

End of Block: Awareness

Start of Block: Readiness

Q23 To what extend do you disagree or agree with each of the following statements?

Q24 I feel confident summarizing data sets using summary statistics and graphics in RStudio.

○ Strongly disagree (1)

○ Somewhat disagree (2)

○ Neither agree nor disagree (3)

○ Somewhat agree (4)

○ Strongly agree (5)

Q25 I feel confident performing basic statistical inference in RStudio.

○ Strongly disagree (1)

○ Somewhat disagree (2)

○ Neither agree nor disagree (3)

○ Somewhat agree (4)

○ Strongly agree (5)

Q26 I feel confident performing basic modeling (linear and/or logistics regression).

○ Strongly disagree (1)

○ Somewhat disagree (2)

○ Neither agree nor disagree (3)

○ Somewhat agree (4)

○ Strongly agree (5)

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Q27 I feel confident creating reproducible data analysis reports in RStudio using R Markdown.

○ Strongly disagree (1)

○ Somewhat disagree (2)

○ Neither agree nor disagree (3)

○ Somewhat agree (4)

○ Strongly agree (5)

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Q28 I feel adequately prepared to apply statistical and data-analytical techniques and/or tools to study a given topic.

○ Strongly disagree (1)

○ Somewhat disagree (2)

○ Neither agree nor disagree (3)

○ Somewhat agree (4)

○ Strongly agree (5)

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Q29 Do you plan to take Data Science course(s) during your undergraduate program or during your graduate study (if you plan to do graduate studies)?

○ Yes (1)

○ No (2)

○ Not Sure (3)

Page Break

Q30 Do you plan to complete a certificate in Data Science during your undergraduate program or during your graduate study (if you plan to do graduate studies)?

○ Yes (1)

○ No (2)

○ Not Sure (3)

Page Break

Q31 Do you plan to complete a minor in Data Science during your undergraduate program or during your graduate study (if you plan to do graduate studies)?

○ Yes (1)

○ No (2)

○ Not Sure (3)

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Q32 Do you plan to complete a degree in Data Science during your undergraduate program or during your graduate study (if you plan to do graduate studies)?

○ Yes (1)

○ No (2)

○ Not Sure (3)

End of Block: Aspriations