

Instagram Women in STEM Codebook

ID Number _____

Date of Post _____

Note: If multiple “shots” are provided for a single post, only code the first appearing shot.

A. DESCRIPTIVE INFORMATION

Image (mark present or absent)

- 1 Image present
- 0 No image present

Text (mark present or absent)

- 1 Text present
- 0 No text present

Video (mark present or absent)

- 1 Text present
- 0 No text present

Setting

- 1. STEM Laboratory (either **in** the lab, or outside a sign to the lab, etc.)
- 2. STEM Classroom/College/University/University context (e.g., graduation, whiteboard)
- 3. Office/Home Office
- 4. STEM Field Setting
- 5. Conference Setting (if a conference is mentioned explicitly, priority is given to the conference code)
- 6. STEMM Hospital/Medical/Health Setting
- 7. Home
- 8. Outside (can be outside if the person is eating outside at a restaurant)
- 9. Museum/Science center/Natural history museum
- 10. Generic/General (e.g., dining **INSIDE** in a restaurant/cafe, virtual background)

Scientific field (the scientific field of the woman in the image/video)

- 1 Astronomy/Outer space (e.g., planets, meteor showers)
Science that encompasses the study of all extraterrestrial objects and phenomena
- 2 Biology (e.g., botany, genetics, marine biology, neuroscience, epidemiology)
Study of living things and their vital processes
- 3 Chemistry (e.g., chemical reactions, experiments, bio-chemistry)
Science that deals with the properties, composition, and structure of substances
- 4 Engineering (e.g., bridges, electricity)
Application of science to the optimum conversion of natural resources to the uses of mankind
- 5 Medicine (e.g., surgery, medical practices, veterinary, healthcare professional)
Practice concerned with the maintenance of health and prevention, alleviation, or cure of disease
- 6 Pharmacology (e.g., drugs, new treatments)
Branch of medicine that deals with the interaction of drugs with the systems and processes of living animals

- 7 Computer Science/Technology (e.g., computer language, machine learning, artificial intelligence, software developer/software engineer)
Study of computers and computing, including theoretical and algorithmic foundations, application of scientific knowledge to the practical aims of human life
- 8 Physics (e.g., gravity, quantum mechanics)
Science that deals with the structure of matter and the interactions between observable parts of the universe
- 9 Mathematics (e.g., paradoxes, calculations)
Science of structure, order, and relation that has evolved from practices of counting, measuring, and describing the shapes of objects
- 10 Robots (e.g., self-driving cars)
Automatically operated machine that replaces human effort
- 11 Paleontology/Natural History
The scientific study of animals or plants, especially as concerned with observation rather than experiment
- 12 Ecology/Environmental Science/Geography/Geology/Zoology/Meteorology
The study of the relationships between living organisms: humans and animals, animals and plants, plants and organisms; e.g., research with birds, tracking animals, tagging animals
- 13 Social science (e.g., psychology, communication, economics, STEM education, public health)
Academic study that deals with human behavior in its social and cultural aspects
- 14 General science (e.g., experiments, observations)
Any system of knowledge that is concerned with the physical world that entails observation
- 15 Forensic science (e.g., forensic science, forensic pathology)
the application of scientific principles and techniques to matters of criminal justice especially as relating to the collection, examination, and analysis of physical evidence
- 16 Post indicates multiple scientific fields in either the image, the text, or the hashtags
- 99 Not specified

Nature of Post

Informational (The post contains content that educates and/or spreads information, e.g. scientific information or facts; not necessarily advice/opinion.)

- 1 Yes
0 No

Entertainment-driven (The post contains content that is entertaining in nature, e.g., humorous (the humor should be obvious/explicit), satire, awe-inspiring, emotionally stimulating, etc.; unless we can see dancing is present in the still, don't consider the video; just because something is cutesy, doesn't mean it's entertainment)

- 1 Yes
0 No

Self-Promotional (The post contains content that promotes an individual, promotes or recaps an event for **promotional purposes**, graduation, advice giving, bragging, introductory/re-introductory posts may be self-promotional, telling a "narrative" about themselves, etc.)

- 1 Yes
0 No

Lifestyle (The post contains content that relates to lifestyle, e.g. day-in-the-life type posts, reflections (ex - talking about what classes folks took in undergrad), what it's like to be a person in STEM, if it's not clear what a woman does for her science role, it will be more challenging to code it as life-style, etc.)

- 1 Yes
0 No

Call to action (The post contains content that is mobilizing, asking their audience to engage further/do something, “comment below,” “tag someone who needs to read this,” e.g. a call to action; if a direct quote included NOT written by the author has a call to action, do **not** code as call to action)

1 Yes

0 No

Acknowledgment of Challenges/ Struggles (The post contains information related to how being in science is hard (e.g., being a woman in a male dominated field); doing science is hard (e.g., feeling connected to others because of challenges); the “cost” of doing science (beyond economics); work-life balance; challenge must be in some way related to STEM/science/working, etc.)

1 Yes

0 No

Hashtags (Does the post include the use of hashtags?)

Are (any of) the hashtags...

1 Content-related and science-related (example: #python for a picture of a snake, #biology; if a username includes a **specific** scientific term, it will be considered content, science-related) [Are related to the content of the visual AND are directly related to STEM fields (science, technology, engineering, math) or the natural world]

1 Yes

0 No

2 Content-related but NOT science-related (example: #football, #candy, #twodegreeshotter) [Are related to the content of the visual but are not related to STEM fields (science, technology, engineering, math)]

1 Yes

0 No

3 Identity related (also, related to gender, age, social roles, sexual orientation, etc. example: #blackwomeninstem, #sciencemom, #LGBTQ+ etc.)

1 Yes

0 No

*List all identity hashtags that are included

- Hashtags should be mutually exclusive (e.g., #WomenWhoCode is **only** identity)

B. SELF PRESENTATION

If a person is present in an image or video, identify the following information

STEM Identity

1 Other recognition (getting recognized by others as a “science person”, award, conference paper or journal article acceptance, publishing science, new job in STEM, graduating, receiving certifications/licenses; recognition by **peers** (e.g., forming a study group; leading a research team)

1 Yes

0 No

2 Self-recognition (recognizing oneself as a “science person;” ex. “I’m a neuroscience student,” working in engineering,” attending a conference, “I’m a scientist, etc.”)

1 Yes

0 No

3 Competence (knowledge and understanding of science content, including “state of the science field”)
ex. Any demonstration of STEM knowledge, such as explanations of STEM content; stating facts about the field

- 1 Yes
- 0 No

4 Performance (social performances of relevant scientific practices; “doing science”, “coding,” consider text/hashtags in addition to the image; graduation does not inherently count as performance, talking about doing bed-side rounds)

ex. Coding, working in a lab, fieldwork, studying, etc.

- 1 Yes
- 0 No

5 Interest (interest/enjoyment of STEM topics/content) Hazari (2010) “desire/curiosity/passion to think about and understand STEM;” consider text/hashtags/image; over-the-top language, exclamation marks, all-caps; interest is related to a scientific topic)

ex. Any expression of interest/enjoyment of STEM, “robots are cool,” “how the brain works is fascinating;” **explicit statement** of interest/enjoyment/awe/wonder/being inspired; emotional connection; be generous with this code

- 1 Yes
- 0 No

Gender expression (choose only one; only code the image)

- 1 Masculine (e.g., broad shoulders, facial hair, shorter hair, strong jaw line, hair on body)
- 2 Feminine (e.g., narrow waist, breasts, long/flowing hair, big eyes, minimal body hair)
- 3 Androgynous (mix of both masc/fem characteristics)
- 99 Unable to tell

Age (choose only one)

- 1 Children (under 12 years old)
- 2 Teenagers (13-17 years old)
- 3 Young adult (18-29)
- 4 Middle aged adults (30-50)
- 5 Older adults (51+)
- 99 Unable to tell (can’t see the person’s face)

Mention of race or ethnicity (check hashtags, text) (code only explicit mentions of race or ethnicity; indicated race or ethnicity as described by the poster).

- 1 Mention of race or ethnicity
- 2 No mention of race or ethnicity

Specific mention of race or ethnicity

Note specific mention of specific race or ethnicity as given by the poster.

Family Relationship

- 1 Yes
- 0 No

Family Relationship Type

- 0 N/A
 - 1 Wife
 - 2 Daughter
 - 3 Mother
 - 4 Grandmother
 - 5 Granddaughter
 - 6 Aunt
 - 7 Niece
 - 8 Sister
 - 9 Other
 - 10 Multiple
- *If multiple, list identities elsewhere

Professional Position/Status

- 1 High school student
- 2 College student
- 3 Graduate student
- 4 Post-doctoral fellow
- 5 Faculty member/ PI/Leader of the lab
- 6 Industry (works for an organization/company doing science, tech, coding)
- 7 Engineer
- 8 Other
- 99 Unable to tell

Sexual Orientation

- 1 Yes
 - 2 No
- If yes, list example _____ (ex. LGBTQ+)

Religion/Spirituality

- 1 Yes
 - 0 No
- If yes, list example _____

Mental Ability (ex. Mental health related, anxiety, depression, self-regulation, etc.)

- 1 Yes
 - 0 No
- If yes, list example _____

Physical Ability (ex. Physical disabilities)

- 1 Yes
 - 0 No
- If yes, list example _____

Nationality/Cultural elements (e.g., languages other than English, reference to cultural practices, items, cultural attire, reference to “home-country,”

1 Yes

0 No

If yes, list example _____

Appearance - Overall Attire

1 Realistic/Everyday/Casual (clothes worn in the field are NOT automatically “professional”)

2 Professional (lab coat, uniform (specific outfit necessary for fieldwork), scrubs, business attire, regalia)

3 Sexy/Glamorous (would not be professionally appropriate)

4 Unstylish/Nerdy/Unattractive

Appearance (feminine or contemporary look)

1 Jewelry/accessory = only wearing a watch is **still** considered jewelry/accessory

1 Yes

0 No

3 Makeup

1 Yes

0 No

4 Pink or purple attire

1 Yes

0 No

“Instapose”/Social Media Presentation (Doring et al., 2016)

1 “Kissing pout”

1 Yes

0 No

2 Imbalance = backward glance//tilted head/tilted hip/if it’s an action shot, not **necessarily** imbalanced; if the image is shot at an angle, this could be imbalance

1 Yes

0 No

3 Downward/withdrawing gaze = looking down, away from the camera

1 Yes

0 No