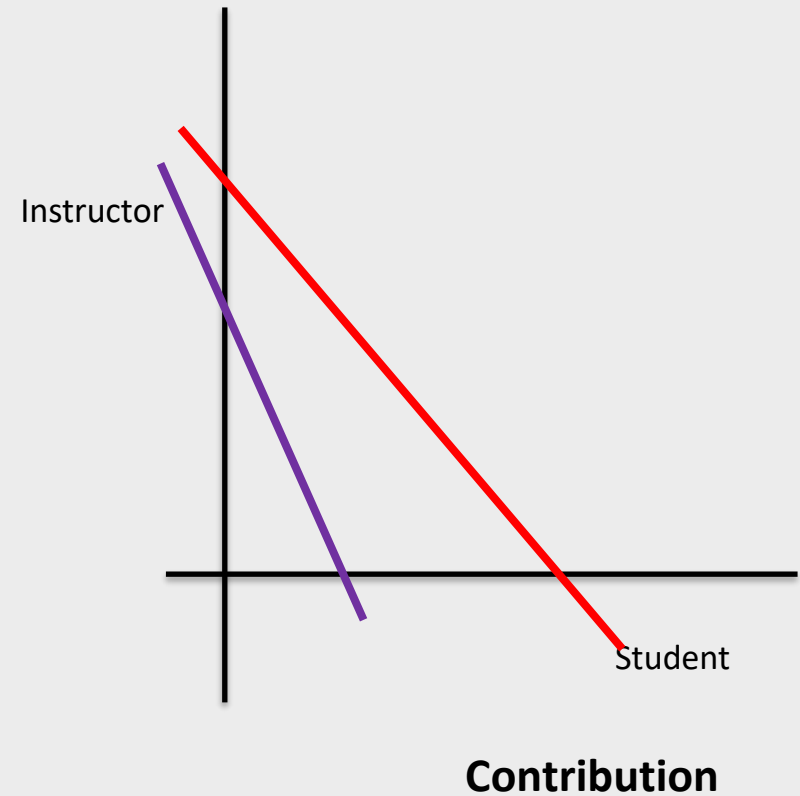
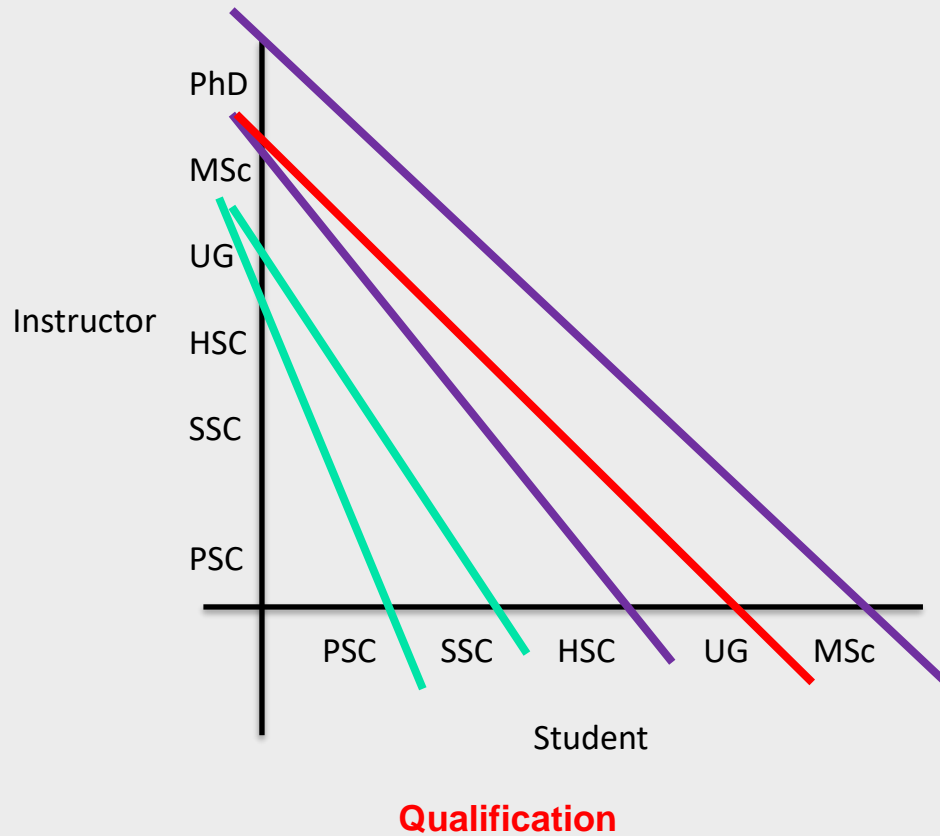




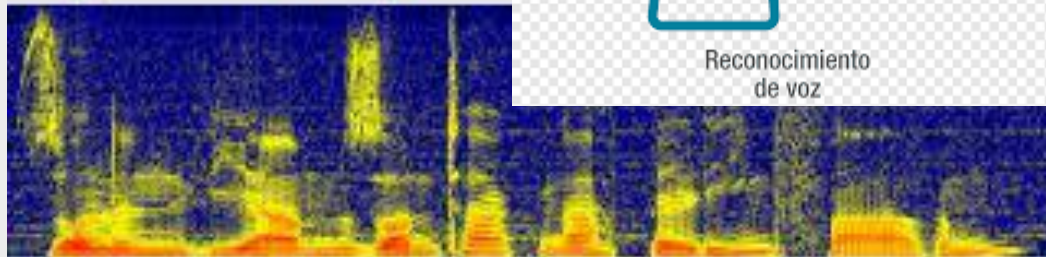
MCSE 666: Pattern and Speech Recognition Aspect & Prospect

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PG Course: Instructor vs. Student Qualification and Contribution



Pattern and Speech Recognition (PSR)



Pattern

Speech

Recognition

PSR Individual Terms: Pattern



pattern

noun

1. a repeated decorative design.
"a neat blue herringbone pattern"

Similar:

design

decoration

motif

marking

ornament

ornamentation



2. a model or design used as a guide in needlework and other crafts.
"make a pattern for the zigzag edge"

Similar:

sample

specimen

swatch

verb

1. decorate with a repeated design.
"he was sitting on a soft carpet patterned in rich colours"

Similar:

decorated

ornamented

figured

tessellated

mosaic

goffered



2. give a regular or intelligible form to.
"the brain not only receives information, but interprets and patterns it"

Similar:

shape

influence

form

model

fashion

mould

style

affect



Translate to

Bangla

noun

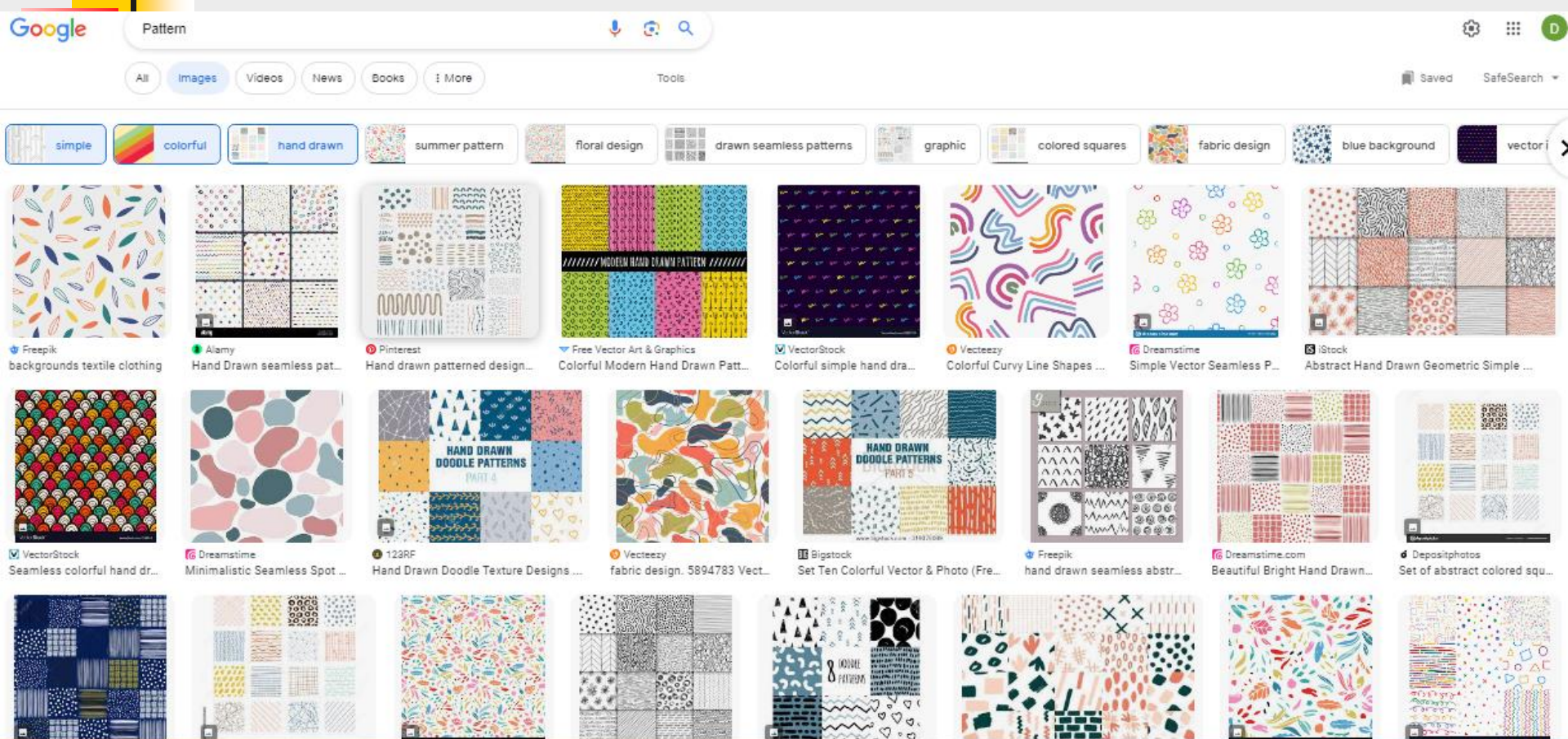
1. প্যাটার্ন
2. আদর্শ

verb

1. আদর্শরূপে গঠন করা
2. আদর্শানুযায়ী গঠন করা

5

PSR Individual Terms: Pattern



A pattern is a regularity in the world, in human-made design, or in abstract ideas. The elements of a pattern repeat in a predictable manner. A geometric pattern is a kind of pattern formed of geometric shapes and typically repeated like a wallpaper design.

PSR Individual Terms: Speech



speech

noun

noun: **speech**; plural noun: **speeches**

1. the expression of or the ability to express thoughts and feelings by articulate sounds.
"he was born deaf and without the power of speech"

Similar:

speaking

talking

verbal communication

verbal expression

articulation

- a person's style of speaking.

"she wouldn't accept his correction of her speech"

Similar:

diction

elocution

manner of speaking

articulation

enunciation



2. a formal address or discourse delivered to an audience.
"he gave a speech about the company"

Similar:

talk

address

lecture

discourse

oration

disquisition



- a sequence of lines written for one character in a play.
"Antony's speech over Caesar's body"

Translate to

Bangla

noun

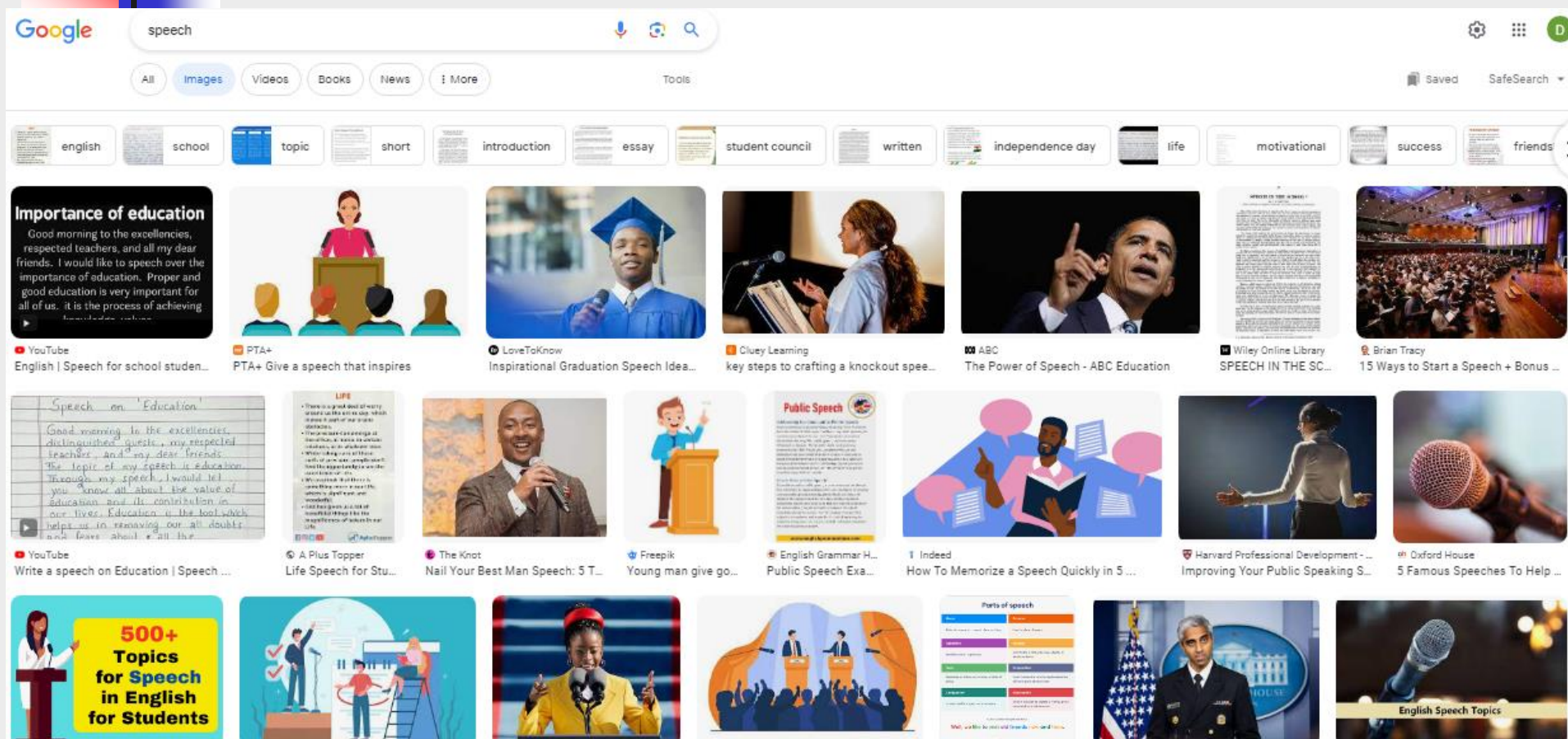
1. বক্তৃত্তা

2. কথাবার্তা

1. কথা

2. বাকশক্তি

PSR Individual Terms: Speech



Speech, language refer to the means of communication used by people. Speech is the expression of ideas and thoughts by means of articulate vocal sounds, or the faculty of thus expressing ideas and thoughts.

PSR Individual Terms: Recognition



recognition

noun

noun: **recognition**; plural noun: **recognitions**

1. identification of someone or something or person from previous encounters or knowledge.
"she saw him pass by without a sign of recognition"

Similar:

identification

recollection

recall

remembrance

2. acknowledgement of the existence, validity, or legality of something.
"the unions must receive proper recognition"

Similar:

acknowledgement

acceptance

admission

conceding

concession



- appreciation or acclaim for an achievement, service, or ability.
"his work was slow to gain recognition"

Similar:

appreciation

gratitude

thanks

congratulations

a pat on the back



- formal acknowledgement by a country that another political entity fulfils the conditions of statehood and is eligible to be dealt with as a member of the international community.

noun: **diplomatic recognition**; plural noun: **diplomatic recognitions**

"they are granting full recognition to the republic"

Translate to

Bangla

noun

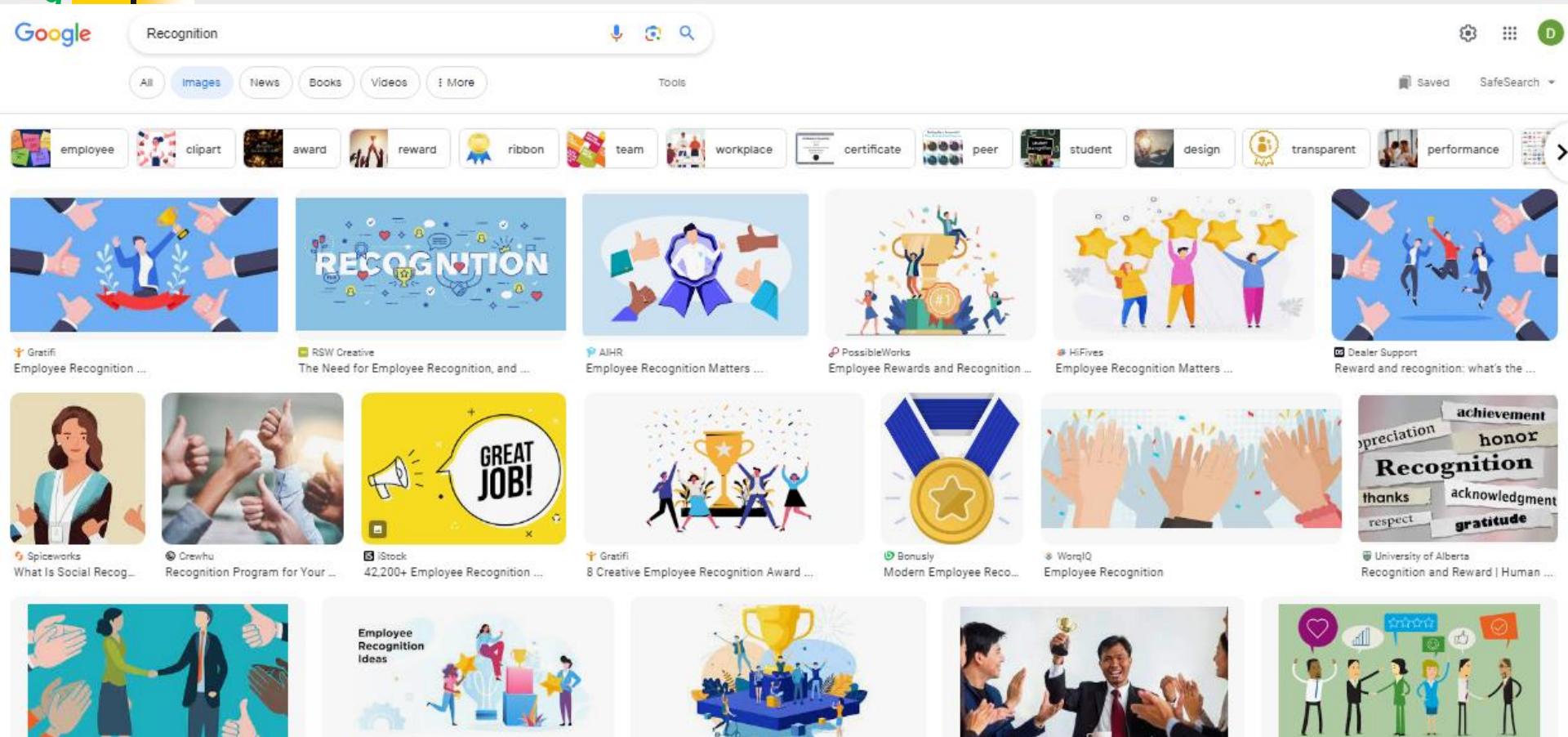
1. স্বীকার

2. ঠাহর

1. স্বীকৃতিদান হওয়া

2. স্বীকৃত হওয়া

PSR Individual Terms: Recognition



- Recognition in sociology is the public acknowledgment of a person's status or merits (achievements, virtues, service, etc.).
- Another example of recognition is when some person is accorded some special status, such as title or classification.

Pattern and Speech Recognition (PSR)

Pattern **Speech** Recognition

Speech **Pattern** Recognition

Pattern Recognition and
Speech Recognition

Intelligent **Pattern** Recognition and
Intelligent **Speech** Recognition

Examples of Pattern Recognition

Table 2 Examples of Pattern Recognition Applications

<u>Problem Domain</u>	<u>Application</u>	<u>Input Pattern</u>	<u>Pattern Class</u>
Bioinformatics	Sequence Analysis	DNA/Protein sequence	Known type of genes/patterns
Data mining	Searching for meaningful patterns	Points in multi dimension space	Compact and well separated clusters
Document classification	Internet search	Text document	Semantic categories
Document image analysis	Reading machine for the blind	Document image	Alphanumeric characters / words
Industrial automation	Printed circuit board inspection	Intensity or range image	Defective / non defective nature of product
Multimedia database retrieval	Internet search	Video clip	Video genres e.g. action, dialogue etc
Biometric recognition	Personal identification	Face, iris & finger print	Authorized user for access control
Remote sensing	Forecasting crop yield	Multispectral image	Land use categories, growth pattern of crops
Speech recognition	Telephone directory enquiry with operator	Speech waveform	Spoken words

Mayank Parasher et al., Anatomy on Pattern Recognition, June 2011, Indian Journal of Computer Science and Engineering 2(3)

Examples of Pattern Recognition

What Are the Real-World Applications of Pattern Recognition?

<https://serokell.io/blog/applications-of-pattern-recognition>

10 Real Life Examples Of Pattern Recognition

<https://numberdyslexia.com/pattern-recognition-real-life-examples/>

Pattern recognition and use in real life problem solving

<https://suresolv.com/problem-solving-techniques/pattern-recognition-and-use-real-life-problem-solving>

What is pattern recognition and why it matters? Definitive guide

<https://theappsolutions.com/blog/development/pattern-recognition-guide/>

MCSE 666: Pattern and Speech Recognition

SUB MCSE 666 Syllabus or Course Outline

Introduction to formal languages and patterns; string languages for pattern description; higher dimensional pattern grammars; syntax analysis as a recognition procedure; stochastic languages; error correcting parsing for string languages; error-correcting tree automata; cluster analysis for syntactic patterns; grammatical inference for syntactic pattern recognition; syntactic approach to texture analysis;

Speech signal: production, perception and characterization; signal processing and analysis; pattern comparison techniques: distortion measures, spectral-distortion measures, time alignment and normalization; recognition system design and implementation: source-coding, template training, and performance analysis; connected word models; continuous speech recognition: sub word units, statistical modeling, and context-dependent units; task oriented models.

Textbooks



Open Discussion on Course Conduction