

The Brain Decoded with CodeX : Vocabulary by Mission

Mission 1: Brainstorm Bootcamp		
1.2	Toolbox	a collection of CodeX and Python concepts that can aid in programming. A tool must be clicked on and added to the toolbox in order to be accessed.
1.2	Debugging	Fixing problems, or bugs, program code.
1.3	Bitmap image	An image made up of graphics bits
1.4	NeoPixels	LED lights that can display any color, using a combination of RED, GREEN and BLUE lights.
1.4	Boolean values	Values that are either True or False (one of two states).
1.5	Peripheral	Devices that interact with the CodeX, used for input and output.
1.5	NeoPixel Ring	An output peripheral that has 8 RGB pixel LEDs arranged in a circle, numbered 0-7.
1.6	180 Positional Servo	A motor that can rotate 180 degrees in each direction, but does not spin.
1.6	Potentiometer	A knob that turns and varies the voltage; is used to control other peripherals.
1.7	Radio communication	Point to point packet communication between multiple CodeX. All CodeX set to the same channel can send and receive messages with each other.
Mission 2: Neuron Navigator		
2.1	Neuron	Fundamental building blocks of the brain; cells that transmit electrical and chemical signals.
2.1	Dendrites	The input branches of a neuron that listen for signals from neighboring neurons.
2.1	Soma	The neuron cell body that processes signals, deciding when to pass them along.
2.1	Axon	The output wire of the neuron, sending messages to the next neuron in line.
2.2	Inhibitory neuron	A neuron that slows down or reverses a signal.
2.2	Malfunctioning neuron	A neuron that misses or skips a signal.
2.3	Custom Module	A file that contains a lot of Python code that will be used in the program. Once you run the file, it stays on the CodeX and its functions can be used after being imported.
Mission 3: Synaptic Sparks		
3.1	Neurotransmitter	A single neuron that sends a specific targeted message to another neurotransmitter.
3.1	Neuromodulator	Neurotransmitters working together to regulate how groups of neurotransmitters communicate.
3.2	Dopamine	A neuromodulator that involves movement, memory, motivation, mood and learning.
3.2	Serotonin	A neuromodulator that influences learning, memory and happiness. It also regulates sleep.
3.5	Stimulants	Drugs that increase dopamine and serotonin levels and speed up messages traveling between the brain and body.

3.5	Depressants	Drugs that lower neuromodulator levels and decrease the electrical activity of brain cells.
3.5	Hallucinogens	Drugs that disrupt communication between chemical networks throughout the brain.
Mission 4: Language Logic		
4.1	Algorithm	A step-by-step process for solving problems or performing calculations.
4.1	Visual cortex	The part of the brain that processes visual information.
4.3	Feature extraction	The process of looking for specific features in data.
4.3	Matrix	A list of lists, a two-dimensional (or more) grid of values.
4.3	Vector	A one-dimensional list of values.
4.4	Envelope	In audio signal processing, an envelope represents the overall shape of a sound signal's volume over time, leaving out the details of the sound's frequency content. It describes how the intensity of the sound changes.
4.5	Biometrics	The use of physical or behavioral characteristics to identify individuals.
4.5	Surveillance	The monitoring of behavior or activities.
4.5	Data Analysis	The process of examining data to extract useful information and make conclusions.
4.6	Wernicke's area	The area in the brain responsible for understanding words and their meanings.
4.6	Broca's area	The area in the brain responsible for speech production and grammatical structures.
Mission 5: Muscle Magic		
5.1	Motor neuron	Special nerve cells that carry orders from the brain or spinal cord directly to your muscles.
5.1	Action potential	Electrical impulses, or signals, generated by the brain and transmitted by motor neurons.
5.1	Neuromuscular junction	The meeting point between a muscle and a motor neuron where the action potentials are transmitted.
5.2	Variable	A name for a value that can change during the program, making it easier to work with data.
5.2	Branching	A programming structure that enables one block of code to run, based on a condition.
5.3	Rhythm generator circuit	Neurons that take turns sending signals by inhibiting each other, creating a rhythm.
5.4	Central Pattern Generator	The part of the motor neural network that sets the rhythm of a motion and keeps the rhythm going.
5.6	Neuroplasticity	The brain's ability to change and adapt in response to stimuli.