

Natural Language Processing (NLP)

Natural Language

Processing

English language

Japanese language

Programming languages

Natural Language Processing

English language
Japanese language
Programming languages

Natural Language

English language

Japanese language

~~**Programming languages**~~

Processing

**How a computer carries out
instructions**

Natural language processing (NLP) refers to the branch of computer science—and more specifically, the branch of artificial intelligence or AI—concerned with giving computers the ability to understand text and spoken words in much the same way human beings can.

NLP combines computational linguistics—rule-based modeling of human language—with statistical, machine learning, and deep learning models. Together, these technologies enable computers to process human language in the form of text or voice data and to ‘understand’ its full meaning, complete with the speaker or writer’s intent and sentiment.

beRatemyProfessor



Professor X



beRatemyProfessor

“I like his/her teaching style”

by: aunt_may_24

“I don’t like his/her teaching style”

by: avengers_ftw

“I had to learn the material all by myself, but I love the class”

by: amazing_spiderman

“Great class and awesome professor”

by: hermione_granger

“Great professor, but I didn’t like the material”

by: steph_curry_3points

Professor X



Teaching Style

“I like his/her teaching style” 😊

by: aunt_may_24

“I don’t like his/her teaching style” 😢

by: avengers_ftw

“I had to learn the material all by myself, but I love topics” 😢

by: amazing_spiderman

“Great class and awesome professor” 😊

by: hermione_granger

“Great professor, but I didn’t like the material” 😊

by: steph_curry_3points

Professor X



Class

“I like his/her teaching style”

by: aunt_may_24

“I don’t like his/her teaching style”

by: avengers_ftw

“I had to learn the material all by myself, but I love topics”



by: amazing_spiderman

“Great class and awesome professor”



by: hermione_granger

“Great professor, but I didn’t like the material”



by: steph_curry_3points

Professor X



Professor X

Teaching Style



Class





Sentiment Analysis

Professor X

Teaching Style



Class





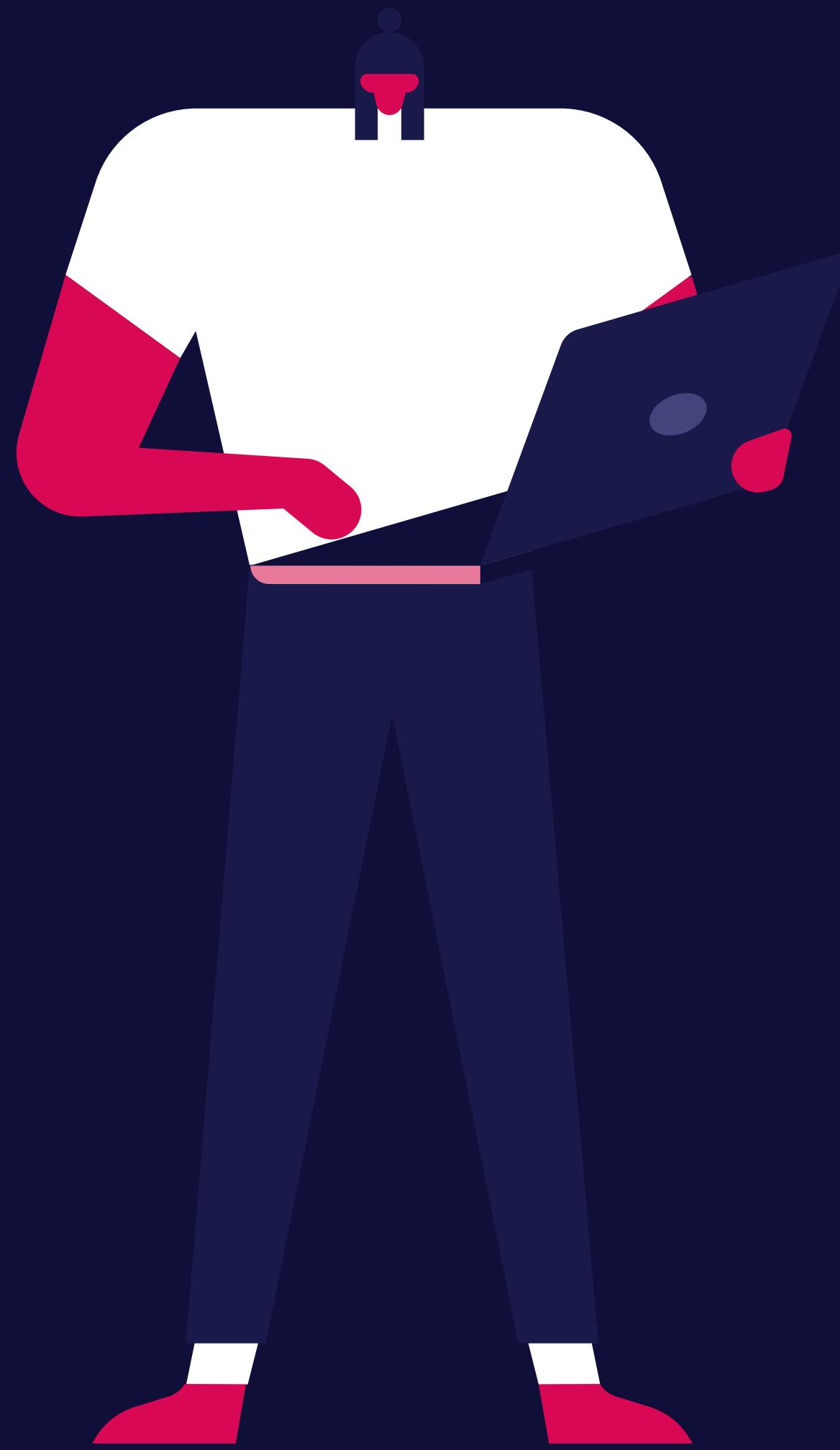
✉ "Hi Professor, can I request an office hour for next week?"

✉ "Faculty meeting 6:00PM this Saturday!"

✉ "I've attached the receipt for last week's travel expenses"

✉ "yOur aCcounT hAs b33n locked please visit: thisIsNotAScam.com/send_money"

✉ "How was your spring semester? Mom says hi!"



✉ "Hi Professor, can I request an office hour for next week?"

class

✉ "Faculty meeting 6:00PM this Saturday!"

admin

✉ "I've attached the receipt for last week's travel expenses"

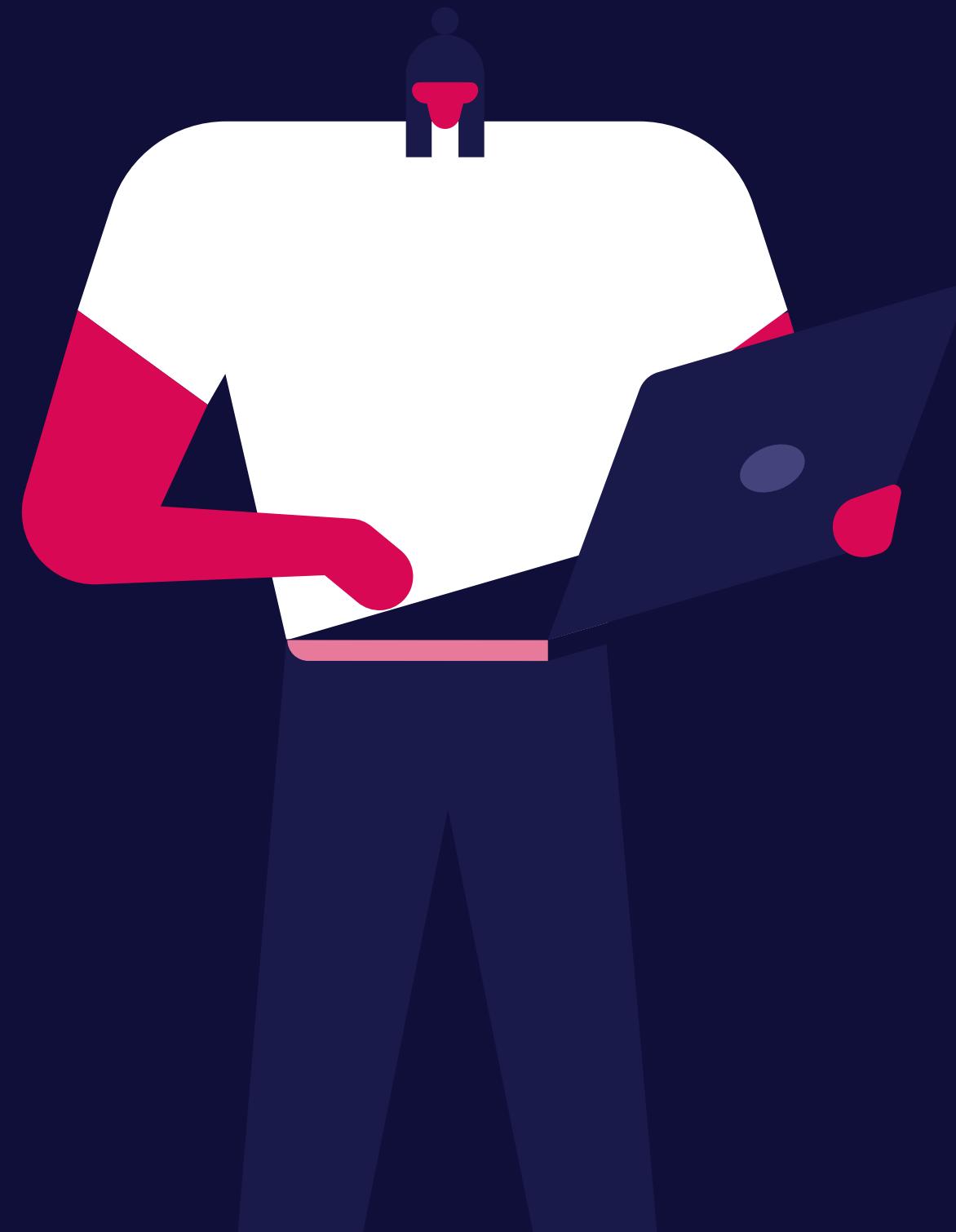
personal

✉ "yOur aCcounT hAs b33n locked please visit: [thisIsNotAScam.com/
send_money](http://thisIsNotAScam.com/send_money)"

\$\$\$

✉ "How was your spring semester? Mom says hi!"

personal



TOPIC MODELING

✉ "Hi Professor, can I request an office hour for next week?"

class

✉ "Faculty meeting 6:00PM this Saturday!"

admin

✉ "I've attached the receipt for last week's travel expenses"

personal

✉ "yOur aCcounT hAs b33n locked
please visit: [thisIsNotAScam.com/
send_money](http://thisIsNotAScam.com/send_money)"

\$\$\$

✉ "How was your spring semester?
Mom says hi!"

personal

Problems with Sentiment Analysis

Tone

Polarity

Sarcasm

Thank you.

Resources

<https://www.ibm.com/cloud/learn/natural-language-processing>

<https://www.reputate.com/blog/sentiment-analysis-challenges-with-solutions/>

<https://www.youtube.com/watch?v=xvqsFTUsOmc&t=4279s>