Week 3

Wednesday, 8 September 2021 13:08

COMPUTER SCIENCE

THEORY
SYSTEMS
APPLICATIONS

COMPUTATIONALLY THINKING

DIVIDING PROBLEM INTO TASKS
CLEAR DESCRIPTION OF TASK

GOOD CODE IS HARD

IN .TXT EVERY LETTER IS 8 BITS
BUT IN DNA WE ONLY HAVE 4 LETTER

A	0 0
C	0 1
G	1 0
T	1 1

(FULL COMPRESSION)

INTRONS ALMOST ALWAYS START WITH GT
AND END WITH AG

WE CAN CREATE A PROBABILISTIC PICTURE

CHECK FOR EDGECASES

EXAMPLE RNA EDITING
RNA-DNA MISMATCHES

ARE DIFFERENCES REAL ?

1 ERROR IN 10^6 CAN LEAD TO 100s OF ERRORS

DID I HANDELED ALL POSSIBLE CASES ?

UNDERSTAND ALGORITHM & HOW THEY CAN GO WRONG
JUST BECAUSE IT RUNS DOES NOT MEAN IS BUG FREE

TRUST, BUT VERIFY

DANGEROUS:

SOFTWARE RUNS BUT GIVES WRONG ANSWERS

COMPUTATIONAL BIOLOGY SOFTWARE

INTERPRETING DATA
ANALYSIS PIPELINE