Porte Aperte

DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

UNIVERSITÀ DEGLI STUDI DI TRIESTE

UNIVERSITÀ DEGLI STUDI DI TRIESTE

AREA SCIENCE PARK

ICTP

SISSA

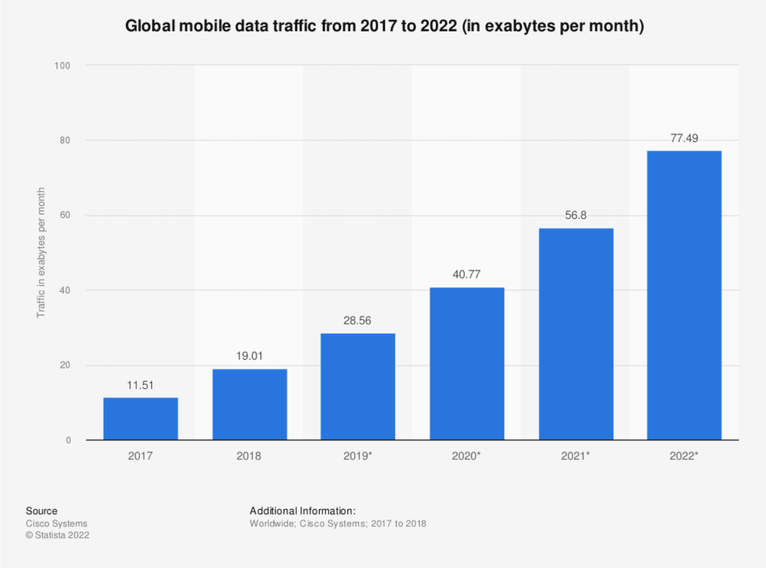
Data Science & Artificial Intelligence

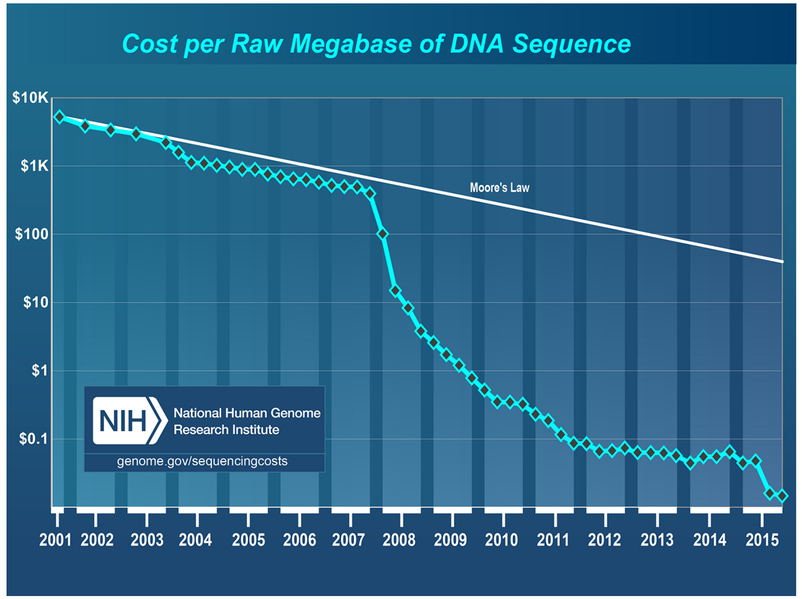
International Master Program @ University of Trieste

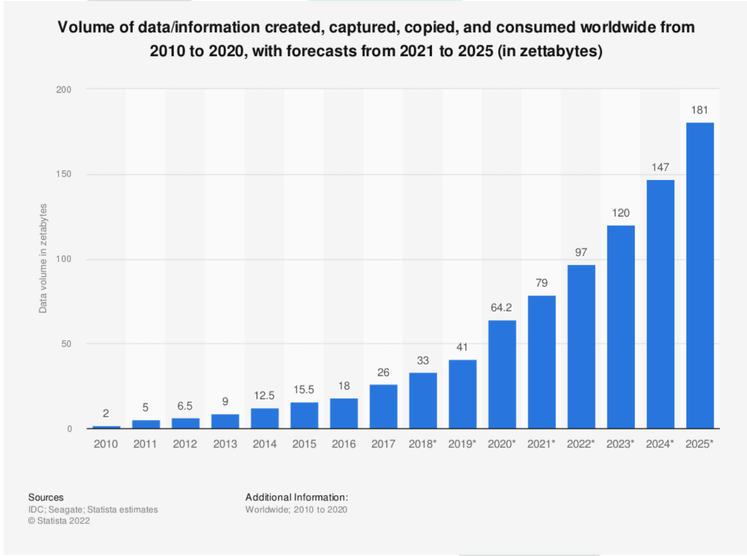
“Artificial Intelligence is the new electricity.”

–Andrew Ng

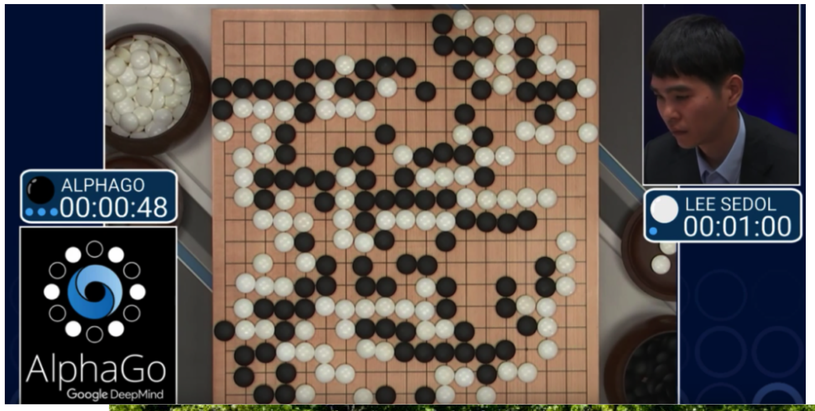
Big Data Everywhere!

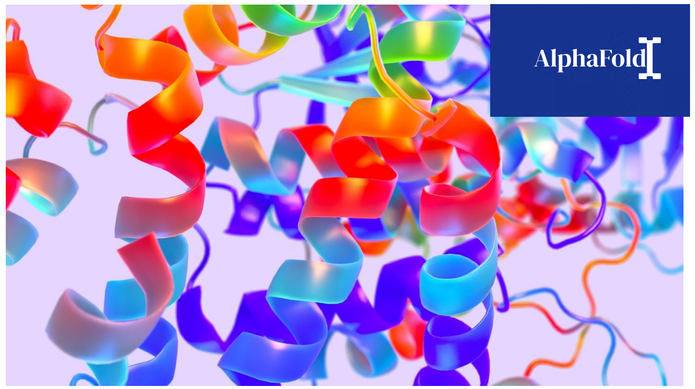


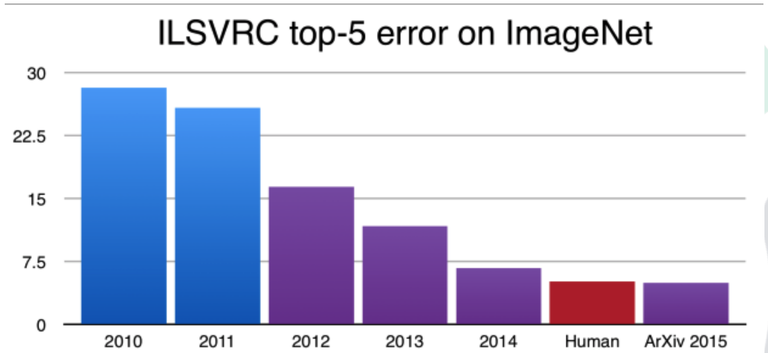




The Era of Artificial Intelligence







Three reasons to choose DS&AI

1. The Master in Data Science and Artificial Intelligence at the University of Trieste is an innovative study program that will provide you with the necessary skills to work successfully in a wide range of sectors, including finance, healthcare, public administration, and industry.

2. The Master in Data Science and Artificial Intelligence at the University of Trieste will provide you with a solid theoretical and practical foundation for working with data and developing advanced artificial intelligence models.

3. The Master in Data Science and Artificial Intelligence at the University of Trieste will provide you with the opportunity to work with industry experts and collaborate with leading companies in the field of data science and artificial intelligence.

Job Opportunities

CAREERCAST

Search Jobs | Post Your Resume | Job Seeker Tools | Niche Job Networks | Jobs Rated | Career Advice Articles

The Best Jobs of 2021

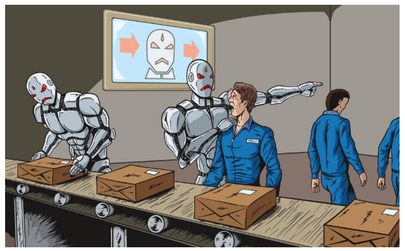
1. Data Scientist

Median Salary: $98,230 **Projected Growth:** 33.00%

ta Scientist, Decision alytics	**Data Scientist**	**Sr Principal Data Scientist**	**Research Data Scient Won Lab**
me Depot, Inc. anta, GA	Perspecta Springfield, VA	Northrop Grumman Clearfield, UT	Cedars-Sinai Medical C West Hollywood, CA

View More Jobs

85% of jobs people will do in 2030 do not exist today (IFTF).



...buts jobs in Data Science and AI will steadily grow... (WEF2016)

DATA

Data Scientist: The Sexiest Job of the 21st Century

by Thomas H. Davenport and D.J. Patil

Harvard Business Review

WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

Global Challenge Insight Report

The Future of Jobs

Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution

Lavori in **diminuzione**:

- Inserimento dati
- Contabili
- Operai in catena di montaggio
- Segretari
- Cassieri
- Autisti

...

Lavori in **crescita**:

- Data Analyst
- Esperti in AI e machine learning
- Esperti di big data
- Sviluppatori e analisti software
- Specialisti della trasformazione digitale
- Specialisti nelle nuove tecnologie
- ...

Four Curricula

- Foundations of Artificial Intelligence and Machine Learning
  machine learning, deep learning, reinforcement learning, explainable AI, perception

- Data Science and AI for Industry and Cyber-Physical Systems
  methods and application to industrial automation, optimisation, cyber-physical systems

- Data Science and AI for Health and Life Sciences
  methods and application to medicine, genomics, neuroscience, epidemiology

- Data Science and AI for Economy and Society
  methods and applications to business, insurance, finance

Common Courses

Advanced Programming / Machine Learning Operations

High Performance and Cloud Computing

Data Management

Statistical Methods

Introduction to Machine Learning

Probabilistic and Deep Machine Learning

Ethics and Law of Data and Artificial Intelligence

Composable study plan from first semester: skip courses with known program (in green) and replace them with more advanced ones.

Two elective courses (12 ECTS)

Internship (12 ECTS)

Thesis (18 ECTS)

Foundations of AI and ML

Common courses plus:

Optimization for Artificial Intelligence

Reinforcement Learning

Algorithmic Design / Algorithmic Data Mining

At least one course

Introduction to Artificial Intelligence
Symbolic and Neuro-Symbolic Artificial Intelligence
Explainable and Reliable Artificial Intelligence
Multi-Agent Systems
Simulation Intelligence and Learning for Autonomous Systems

At least one/two courses

Unsupervised Learning
Computer Vision and Pattern Recognition
Advanced Deep Learning and Kernel Methods
Natural Language Processing
Advanced Statistical Methods
Information Retrieval and Data Visualisation
Advanced Data Management

Data Science and AI 4 Industry and CPS

Common courses plus:

Optimization for Artificial Intelligence / Mathematical Optimization

Reinforcement Learning

Modelling and Control of Cyber-Physical Systems I

Modelling and Control of Cyber-Physical Systems II

Up to two courses

Artificial Intelligence for Cyber-Physical Systems

Simulation Intelligence and Learning for Autonomous Systems

Numerical Analysis

Data Science and AI 4 Health and Life Sciences

Common courses plus:

Unsupervised Learning

Algorithmic Design / Algorithmic Data Mining

Statistical Learning in Epidemiology

Computational Genomics

Up to two courses

Stochastic Modelling and Simulation

Computational Neuroscience

Advanced Statistical Methods

Data Science and AI 4 Economy and Society

Common courses plus:

Unsupervised Learning

Advanced Statistical Methods

Up to five courses

Data Science for Insurance

Bayesian Statistics

Entrepreneurship and Business Modelling

Statistical Analysis of Social Networks

Natural Language Processing

Multi-Agent Systems

Information Retrieval and Data Visualisation

Other Info on Study Plan

- Elective courses

  Essentially any course you seen before, plus few more (check official study plan).
  There are curriculum specific automatic choices.

- Internship and Thesis

  Internships in companies or research labs. Can be combined together for a longer activity (both in company and research lab). Together = 30 ECTS = 1 semester full time

- Where are the lectures?

  At the university of Trieste - some 2nd yeat courses can be in partially in SISSA

Other Info

- Requirements to Enroll
  30 ECTF in mathematics, computer science, statistics, physics, quantitative finance or genetics and molecular biology
  At least 9 of those in mathematics.

- Positions Available
  65 positions, 15 reserved for non EU students

- Selection Procedure
  Two application phases (april-may and july-august), evaluation of CV + interview (beginning of june / september).
  Applications together with Scientific and Data-Intensive Computing, you need to specify your preference.
  Strict window to enrol, remaining position offered to following eligible but not admitted students.

- Working students
  3 or 4 year part time program available. Lectures are recorded and possibly streamed, exams in presence.

Double Degree

- Double degrees connected with the European University Transform4Europe
- Limited positions for enrolled students on specific curricula
- One compulsory semester abroad (I semester II year)
- Internship+Thesis potentially abroad

TRANSFORM 4EUROPE

UNIVERSITÄT DES SAARLANDES

Universitat d'Alacant
Universidad de Alicante

ktu 1922 kaunas university of technology

THANK YOU!

FIRST CALL IS OPEN
CLOSES ON MAY 18

dsai.units.it