

Yousef Kanj

Data Scientist – Mechanical Engineer

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SUMMARY

An adaptable and dynamic Mechanical Engineer, currently pursuing my Master's Degree in Data Science. I am eager to apply my dual background to find innovative and practical, data-driven solutions with real-world impact. I am looking for opportunities to contribute and grow, within an engaging multi-disciplinary data science team.

EDUCATION

Master's degree

M.Sc. in Data science

Sapienza Università di Roma 📅 Sept 2023 – June 2025 📍 Rome, Italy

- Pursuing a Master's Degree in Data Science, enhancing expertise in Statistics, Machine Learning, and Data Analysis.
- Gaining hands-on experience with real-world data sets, focusing on practical application and problem-solving.
- Tackling challenges in Big Data Analytics, AI Implementation, and Data Visualization.
- Aiming to translate complex data into meaningful business intelligence, ensuring stakeholders receive impactful insights for informed decision-making.

Bachelor's degree

B.Sc. in Mechanical Engineering

Politecnico di Torino 📅 Sept 2020 – June 2023 📍 Torino, Italy

- Bachelor's Degree in Mechanical Engineering providing a strong foundation in problem-solving skills.
- Skilled in breaking down complex problems, identifying root causes, and analyzing components for effective solutions.
- Acquired a robust toolkit leveraging Mathematics, Physics, and Industrial Design to devise practical and efficient solutions.
- Fostered a meticulous approach to design and innovation, preparing for technical challenges with precision and creativity.

PROJECTS

Enhancing Autonomous Vehicle Sensor Safety

Final Project for Fundamentals of Data Science Course:

- Developed a Convolutional Neural Network (CNN) for traffic sign classification using the GTSRB dataset, improving autonomous driving safety.
- Implemented and analyzed the FGSM adversarial attack to assess the vulnerability of CNN models to malicious data manipulations, highlighting the importance of robust model defenses in real-world applications.
- Explored and evaluated defenses against adversarial attacks, ensuring the reliability and security of traffic sign recognition systems under potential malicious threats
- Team lead, divided tasks between all 5 team members.

Recommendation engine for Netflix users

Final Project for Algorithms in Data mining Course:

- Using a Netflix user dataset, Implemented a hybrid recommendation system using LSH and Minhash to give movie suggestions for Netflix users, improving content personalization by analyzing user preferences and behavioral data.
- Utilized advanced clustering techniques to segment users, and employed feature engineering and principal component analysis to extract insights from user behavior.

Formula Student – Squadra Corse Driverless 📅 Sept. 2022 – May 2023

- Member of the Mechanics & Powertrain division.
- Implemented a new frontal impact structure after developing and testing different designs using Finite element analysis in Altair Hypermesh.
- Worked with the team to design, prototype, and test a new autonomous braking system for the vehicle.

SKILLS

- Python and libraries: NumPy, Pandas, SciKit, Tensorflow, Seaborn
- Statistical modeling in R
- Cloud computing and storage: AWS S3
- Big data frameworks: Apache Hadoop, Spark HDFS, Map reduce, AWS EMR
- Model Deployment and Management: Docker, Kubernetes
- SQL
- Solidworks, Hypermesh, Matlab
- Certified in Cybersecurity by ISC2

STRENGTHS

Teamwork and Communication

5 years of experience as a volunteer and organizer in the Lebanese scouting association. Responsible for planning and organizing events and camps on a weekly basis.

Presentation and Public Speaking

Member of my local high school's Toastmaster's club, Completed John maxwell's Leadership training course.

Organization

Skilled at thriving in group settings, demonstrating exceptional adaptability and flexibility.

Critical thinking and Problem Solving

As an engineer, I excel in critical thinking and problem-solving, adeptly transferring these skills to efficiently tackle any task.

LANGUAGES

English: Native

Arabic: Native

Italian: Basic

INTERESTS AND HOBBIES

- Artificial intelligence
- Cybersecurity
- Mountaineering and Hiking
- Running