ROBEN BHATTI

M.Sc Physics of Data Student

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SUMMARY

24-year-old M.Sc. Physics of Data student with a strong background in Physics, Mathematics, and Statistics. Proficient in Python, R, SQL, and various technologies, including Kafka and PySpark. Passionate about Data Science and Physics, with a keen interest in exploring innovative solutions for challenging problems.

SKILLS

Languages: Python, R, SQL, VHDL, Arduino, Latex, Shell, VBA.

Technologies: Docker, Git, Anaconda, Kafka, Spark, Keras, Pytorch, Numpy.

EXPERIENCE

8/2024 – 3/2025	**Data Scientist Intern** Bayesian Modelling for Reusable Launch Vehicles	**DLR Bremen (DE)**
3/2022 – 6/2023	**Study Room surveillance** Offered assistance, resolved issues, and ensured a conducive environment.	**University of Padua**

EDUCATION

10/2022 - 3/2025	**Master Degree in Physics of Data** master degree program that merges and innovates the educational offers from Physics and Data Science	**University of Padua**
10/2019 - 10/2022	**Bachelor Degree in Astronomy** Bachelor program provides solid foundation in physics, mathematics, and statistics.	**University of Padua**
9/2014 - 7/2019	**Industrial thermo-technical expert** Expert in designing, regulating, and controlling heating systems for civil and industrial installations, with strong academic background	High School *ITIS B. Castelli* **(Brescia(ITA))**

PROJECTS

Streaming processing of cosmic rays using drift tubes detectors   **Kafka, PySpark**
Simulate a continuous DAQ stream of real data collected in a particle physics detector and publish the results in a dashboard for live monitoring.

Bayesian optimization with Gaussian Processes   **Python,TensorFlow**
GP implementation to find the minimum of analytical test functions and fine-tune hyperparameters in a CNN. MCMC and point estimation with Maximum Likelihood are explored to find hyper-hyperparameters for the GP kernel

DETR for recognition of real chess game   **Pytorch**
DETR finetuning for recognition of chess pieces and their position on a real board. Conversion of the game state in FEN annotation.

Feature importance methods of simulated binary black holes   **Python, Machine Learning**
Determines what features have the highest impact on the evolution of a binary system into a Binary Black Hole using various Machine learning techniques.

Naive Bayes multinomial classifier for fake news detection   **R**
Accurate and automated identification of fake news sentences using Bayes Theorem.

LANGUAGES

English - C1, **Italian** - native

EXTRA

11/2023	**NOI Hackaton SFSCON Edition** Participated in a 24h coding challenge.	**Bolzano**