



# Hajali Bayramov

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<https://github.com/hajalibayram> | **Address:** Turin, Italy (Home)

## ABOUT ME

Software/AI Engineer with over 8 years of experience in developing innovative solutions, actively seeking PhD positions. Passionate about interdisciplinary AI research, particularly in natural language processing, data-driven prognostics, and AI applications for the automotive industry. Known for a determined and solution-oriented mindset, strong work ethic, ambition, and adaptability to challenging situations. Committed to advancing AI reliability and explainability for societal benefit.

## EDUCATION AND TRAINING

10/2020 – 04/2023 Turin, Italy

**MASTER OF SCIENCE** Polytechnic University of Turin

- Focus on data-driven processes.
- Methodologies and technologies for data acquisition, storage, analysis, and visualization.
- Predictive and non-predictive models based on machine learning algorithms.
- Mathematical and probabilistic-statistical models for data representation, transformation, and modelling.
- Stochastic optimization and data analysis ethics and protection.
- Deeper understanding of topics, such as advanced machine learning techniques, big data analytics, or specialized domains like healthcare informatics or financial data analysis.
- More interdisciplinary courses like Innovation Management and Value Extraction from Data; a focus on understanding and managing innovation processes and emphasis on extracting value from data through strategic analysis and decision-making.

**Field of study** Data Science and Engineering | **Final grade** 106/110 |

**Thesis** Application of Artificial Intelligence for Data-Driven Prognostic of Finding Remaining Useful Life in Filters

09/2015 – 06/2020 Baku, Azerbaijan

**BACHELOR OF ENGINEERING** Baku Higher Oil School

- Basic engineering courses: physics, mathematics, programming, differential equations, computer architecture.
- Specialised engineering courses: electrical engineering, robotics, microprocessors, digital signal and data processing, etc.
- Management courses: economic principles, management theory, and automation engineering technical documents.

**Field of study** Process Automation Engineering | **Final grade** 93.28/100 |

**Thesis** Intelligent Monitoring System for Anomaly and Fault Detection in Complex Systems

## WORK EXPERIENCE

16/05/2023 – CURRENT Turin, Italy

**AI/SOFTWARE ENGINEER** REPLY S.P.A.

- Software Engineer for Toyota Motors Europe. The project covers the implementation of Smart Charging Stations of Electric Vehicles (keywords: Java, SpringBoot, GIT, Github Actions, StreamNative, Docker, MongoDB, Pulsar, Agile)
- Dashboard implementations
- Project on "AI implementation for developers and PM on the cloud".
- Master thesis student from 09/2022 till 02/2023, conducting research on AI pipeline for the management and predictive maintenance of a chemical mixing system.

10/2021 – 05/2022 Turin, Italy

**DATA SCIENTIST/SOFTWARE ENGINEER** PIAZZA DEI MESTIERI

- Experienced with programming languages such as Python, Java, C# etc.,
- Able to create SQL and Python programming modules for custom insights required by our Product Teams. Leverage statistical analysis to understand what is acceptable versus outliers.
- Able to successfully collaborate with both business users and engineers for effective analytical solution development and deployment.
- Organized data from multiple analytic platforms.
- Managed spreadsheets and performed reports.

05/2022 – 06/2022 Turin, Italy

**MACHINE LEARNING ENGINEER/RESEARCHER INTERN** ATELIER RIFORMA

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- Researching and applying AI techniques for waste sorting and sustainable apparel up-cycling.

02/2020 – 06/2020 Baku, Azerbaijan

**DATA SCIENTIST INTERN** CASPIAN INNOVATION CENTER, SOCAR&IBM JV

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- Conduct research to collect and assemble data for the database.
- Maintain the data integrity during extraction, manipulation, processing, analysis and storage.
- Manage database design and maintenance, administration.

## DIGITAL SKILLS

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Python | Java | Git | Microsoft Office | SQL | C++ | C | Linux | MongoDB | JSON | Python for data analysis (NumPy, Pandas, ...) and application development (PyQt) | Deep Learning (Tensorflow, Pytorch(basic), Jax/Flax(basic) ) | Machine Learning | LaTeX (very good)

## PROJECTS AND PUBLICATIONS

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### Projects

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- Google Students data analysis
- Analysis of hotel data using python
- Intelligent Monitoring System for Anomaly and Fault Detection in Complex Systems
- Applications of Krylov methods, PCA, and SVD in real-world problems
- Applications of networks and game theory methods techniques in solving real-world problems
- Applications of Mathematics in Machine Learning in solving a real-world problem
- Applications of numerical optimization techniques (constrained and unconstrained) in solving real-world problems

### Publications

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- Are Local Features All You Need for Cross-Domain Visual Place Recognition? <https://arxiv.org/abs/2304.05887>
- Application of Artificial Intelligence for Data-Driven Prognostic of Finding Remaining Useful Life in Filters <https://webthesis.biblio.polito.it/26983/>

## LANGUAGES

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### Native - Azerbaijan

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### Foreign

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- English - Advanced (C1)  
*Cambridge CAE*  
29/11/2023  
C2 CEFR level, # Verification: C5036491
- Turkish - Advanced (C1)
- Italian - Upper Intermediate (B2)  
*PLIDA*  
12/2021  
B1 CEFR level, # Verification: 119182

## REFERENCES

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### Prof. Gancho Vachkov - B.Eng thesis supervisor

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gancho.vachkov@gmail.com

### Prof. Danilo Giordano - M.Sc thesis supervisor

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danilo.giordano@polito.it

### Prof. Paolo Garza - Distributed architectures for big data processing and analytics professor (Cum Laude)

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