

Marina Pavlovic

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Full EU Clean Drivers Licence
Portfolio | <https://github.com/Blux200>

Profile:

- Completed a 3-month intensive Data Engineering training program as a Graduate Data Engineer at FDM Group.
- Higher Diploma in Computing Science, specialising in Artificial Intelligence and Machine Learning (ongoing).
- Level 7 in Applied Data Technologies Graduate (1.1).
- Skilled in designing and managing data pipelines, encompassing ingestion, cleansing, transformation, and preparation of data for downstream analytics and visualisation.
- 15 years of experience in people management and training.
- Keen interest in Artificial Intelligence, Data Engineering, emerging technologies, and science.
- EU Citizen.
- **Languages:** English (Fluent written & oral), Croatian (Native speaker), Spanish (Basic Conversational).

Technology Skills:

- Languages & Tools: Python, SQL, Bash, Java, HTML, JavaScript, Kafka, Hadoop, PySpark
- Python: Built end-to-end data pipelines for FDM and academic projects using Pandas, NumPy, and API integration; developed Kafka-based data ingestion systems and batch processing workflows.
- SQL & Databases: Designed and managed databases with MySQL and SQL Server; wrote advanced queries for data extraction, transformation, and reporting; integrated SQL with Python and Hive for full data workflows
- Data Engineering: Experience with real-time streaming (Kafka), distributed processing (Hadoop, Hive), and automation via shell scripting; delivered structured data analysis pipelines with logging, filtering, and reporting features.
- Unix & Scripting: Developed menu-driven Bash applications to process and analyse data; implemented logging and automation for file transformation and validation.
- AI/ML Integration: Currently leading a phased AI project for dementia care, integrating ML techniques for chatbot communication, image-based emotion recognition, and cognitive behaviour modelling.

Education:

Sept 2024 – August 2025

National College of Ireland, Dublin

Higher Diploma in Science in Computing (Artificial Intelligence/Machine Learning)

Modules:

Introduction to Databases, Object-Oriented Software Engineering, Software Development, Web Design and Client-Side Scripting, Artificial Intelligence, Computer Architecture, Statistics, Machine Learning Fundamentals

Project Example: Fashion Store Database

Designed and implemented a relational database for a fashion retail store, optimising data management and order tracking. Structured customer, order, and contact data with primary and foreign key relationships to ensure integrity. Developed SQL queries for efficient data retrieval, relationship mapping, and trend analysis. Utilised SQL, normalisation techniques, and data constraints to enhance query performance and maintain database consistency.

Sept 2023 – May 2024

Atlantic Technological University, Donegal

Level 7 Diploma in Applied Data Technologies (1.1)

Modules:

Databases, SQL, Advanced SQL, Data Analytics and Visualisation, Business Intelligence

Project Example: AI Development by Political Regimes

Analysed the relationship between AI advancements, political regimes, and societal impact using data-driven methods. Explored how democracies and authoritarian governments deploy AI, highlighting trends in ethics, regulation, and governance. Utilized Python, Pandas, and data visualisation to uncover geopolitical and economic implications.

Career History:

02.2025 – 04.2025:

FDM Groupe, Dublin
(IT Consulting)

Graduate Data Engineer – Consultant

- Python for Data Engineering – Built automation and transformation scripts for large datasets using Pandas, NumPy, and custom functions; applied advanced techniques like lambdas, comprehensions, and exception handling.
- SQL & MySQL – Developed optimized queries with joins, subqueries, views, and aggregations for data extraction, cleansing, and transformation.
- ETL Development – Designed and maintained batch and real-time ETL pipelines; leveraged PySpark for distributed processing and Kafka for real-time data streaming; applied Inmon and Kimball methodologies for data modelling.
- Data Pipeline Tools – Experience with Hadoop for scalable storage, Hive for distributed querying, and Bash scripting for data ingestion and workflow automation
- Database Design & Management – Normalized, optimized, and maintained relational databases to support scalable and efficient analytics.
- Version Control (Git & GitLab) – Used Git and GitLab for branching, merging, and code review processes in collaborative development environments.

Projects:

• **Real-Time Data Pipeline with Kafka and UK Food Standards API**

Built a Kafka-based pipeline to fetch real-time food hygiene data from the UK Food Standards Agency API. Designed producer-consumer architecture to stream, filter by authority (e.g., Manchester, London, Belfast), and store the cleaned data into CSV files for further analysis.

• **Batch Data Processing with Hadoop and Hive (Alzheimer's Dataset)**

Developed ETL pipelines using Hadoop Distributed File System (HDFS) and Hive to process Alzheimer's patient data. Performed advanced SQL-based analysis on gender diagnosis rates, sleep quality, depression incidence, and education levels to extract key healthcare insights.

• **Large-Scale Data Analysis with PySpark and Databricks (Refugee Impact on GDP)**

Conducted large-scale data analysis on refugee migration patterns and economic impacts using PySpark on Databricks. Designed interactive dashboards to visualize refugee trends since 1990, correlating migration with GDP growth rates across different countries.

02.2018- 12.2024:

H&M Hennes & Mauritz, Ireland
(Fashion Retail)

Visual Merchandiser/Area Visual Merchandising Trainer

- Continuously provided comprehensive 2-month training for new Visual Merchandisers across Ireland.
- Developed weekly workload plans for in-store training enabling adequate coverage of training material while performing everyday tasks to maximize sales and customer satisfaction.
- Provided trainees with guidance and support for the duration of training and after.
- Evaluated each trainee's performance through detailed weekly feedback which improved trainees' effectiveness.
- Trained over 20 Visual Merchandisers who were able to work using initiative and knowledge to improve sales in individual stores and departments.

More work experience details available on LinkedIn

Interests and Achievements:

Mathematics:

- Certificate in Machine learning mathematics from Deep Learning in Linear Algebra and Calculus.

Academic plans:

- Committed to continuous study of Artificial Intelligence to pursue an MSc and eventually a PhD.

Fundraising:

- Orchestrated fundraising across H&M stores for water filters for a village in Sumatra, Indonesia after which the first shipment was made.

Personal Achievements:

- Practicing Yoga and Meditation for 15 years as a base for a well-balanced lifestyle.
- Continuously advancing in surfing skills.

REFEREES AVAILABLE UPON REQUEST