# ANDREI-EMIL MUNTEAN

Cloud Platform Engineer (FinOps) — Data Engineer — AWS — Azure — Python

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## Professional Summary

Cloud Platform Engineer focused on FinOps, with 4+ years of hands-on IT experience across networking, software testing, data engineering and cloud platforms. Part of Continental's central cloud infrastructure team, responsible for consumption-based cost allocation and chargeback across the company's AWS and Azure estate. Previously built an end-to-end AWS data pipeline for BMW (via Cognizant) using Terraform, AWS Glue, Athena and QuickSight, with CI/CD and automated testing. MSc in Data Engineering with applied machine learning work, including a GRU-based clinical prediction prototype trained on MIMIC-III.

## Technical Skills

**FinOps:** FinOps Framework (FinOps Foundation), Maturity Assessment, Cost Allocation & Chargeback, FOCUS Specification
**Cloud:** AWS (S3, Glue, Athena, Lambda, QuickSight, IAM, cross-account setups), Azure, GCP (Cloud Run, Firestore, Cloud Scheduler)
**Programming:** Python (pandas, PySpark, PyTorch, scikit-learn), SQL, C++
**Data Engineering:** ETL Pipelines, Data Modeling, S3 Partitioning, Parquet, Apache Iceberg, API Integration (Microsoft Graph)
**Big Data:** Apache Spark, Hadoop, BigQuery
**Machine Learning:** GRU/RNN, CNN, XGBoost, Random Forest, Logistic Regression, Clustering, Cross-Validation, Grad-CAM
**Infrastructure:** Terraform (IaC), GitHub Actions (CI/CD), Docker, Git, Linux
**Testing & Backend:** Playwright, pytest, Flask, FastAPI, Supabase
**Visualization:** QuickSight, Power BI, Grafana
**Streaming:** MQTT, Node-RED, Time-Series (InfluxDB)

## Professional Experience

### Cloud Platform Engineer (FinOps)

Continental Automotive Products SRL, Timisoara — Jul 2026 – Present

- Responsible for the consumption-based **cost allocation and chargeback**: shared costs (savings plans, networking, central development) are distributed through custom allocation logic and the results handed off to finance for invoicing.
- Member of the central cloud platform team that provisions cloud access and base infrastructure across the company's multi-account **AWS** and **Azure** estate.
- Conducting a **FinOps maturity self-assessment** (FinOps Foundation framework) across capabilities such as Allocation, Architecting for Cloud, FinOps Tools & Services, Reporting & Analytics and Data Ingestion.
- Working with **FOCUS**-formatted cost and usage data.

### Junior Data Engineer

Cognizant Mobility Romania – Project for BMW — Sep 2025 – Jun 2026

- Built an end-to-end AWS data pipeline (SharePoint → Lambda → S3 → Glue → Athena → QuickSight) that automated a previously manual monthly incident report.
- Implemented ingestion via **Microsoft Graph API** into Amazon S3 and developed **AWS Glue Jobs** for automated transformation.
- Implemented cross-account data replication with **AWS Lambda** across four AWS accounts and configured cross-account Athena and QuickSight access.
- Provisioned infrastructure with **Terraform** and configured **GitHub Actions** CI/CD for deployment and as a quality gate.

- Applied S3 partitioning to improve **Amazon Athena** query performance and reduce scan costs; wrote complex analytical SQL.
- Built a **Playwright + pytest** end-to-end UI test suite for the SharePoint data source, handling Microsoft SSO/MFA through stored authentication state.

**Junior Tester**
Cognizant Mobility Romania — Sep 2024 – Sep 2025

**Student Intern – IP Network**
Nokia (part-time) — Oct 2022 – Aug 2024

- Worked on IP networking fundamentals, routing protocols (IS-IS) and MPLS; obtained **Nokia Routing Specialist 1 (NRS1)** certification.
- Contributed to a network donation project for universities: designed network configurations, implemented the solution and wrote the documentation.

## Training & Academies

**IP Network Academy** – Huawei (**HCIA-Datacom** certification) — Jul 2022 – Oct 2022

**Web Development Academy** – The Access Group (JavaScript, React) — Mar 2022 – Jun 2022

## Selected Projects

**MedAI – Clinical Prediction Prototype (MSc Dissertation)** *2026*

- Developed a **GRU-based** diagnostic prediction model trained on **MIMIC-III** (∼46,500 patients, PhysioNet credentialed access).
- Built tabular risk classification models (XGBoost, Logistic Regression, Random Forest).
- Served the models through a **Flask** web prototype backed by Supabase, deployed on Railway.

**Large-Scale Web Data Processing – Common Crawl (PySpark)** *2025*

- Developed an end-to-end **Apache Spark** pipeline converting Common Crawl WARC files into optimized **Parquet**.
- Implemented NLP clustering using **TF-IDF + KMeans (Spark MLlib)**.

**HR Analytics – Machine Learning Workflow** *2025*

- Developed a Decision Tree classifier using **10-fold stratified cross-validation**, achieving **78.2% accuracy** on an imbalanced dataset.
- Implemented K-Means clustering (k=3, k=5) evaluated using the Davies–Bouldin index; built Power BI dashboards for interpretation.

**Medical Image Classification – Deep Learning (PyTorch)** *2024*

- Built a CNN-based classifier for breast ultrasound images (normal / benign / malignant), achieving **88% test accuracy**.
- Evaluated with precision, recall, F1-score and confusion matrix; applied cross-validation and **Grad-CAM** for interpretability.

**Real-Time Computer Vision System – YOLOv8 (Bachelor Thesis)** *2024*

- Developed a custom-trained YOLOv8 model for object, shape and color detection, deployed as a real-time inference pipeline using OpenCV + Kivy.

## Education

**MSc in Data Engineering**
Faculty of Electronics, Telecommunications and IT, University Politehnica Timisoara — 2024 – 2026

**BSc in Electronics, Telecommunications and Information Technologies** (Taught in English)
Faculty of Electronics, Telecommunications and IT, University Politehnica Timisoara — 2020 – 2024