

DIOGO CATARINO

+352 661 692 155 ✦ Luxembourg

diogo-catarino@outlook.com ✦ diogo-catarino.xyz ✦ linkedin.com/in/diogo-catarino

PROFESSIONAL SUMMARY

Software & AI Engineer with a Master’s in Computer Science. Specialized in building full-stack applications, robust data pipelines, and autonomous AI Agent systems (Agentic Workflows) that drive multi-million dollar operational savings. Strong foundation in Python and scalable software architecture.

EXPERIENCE

Software Developer Engineer
Aug 2024 - Present
Amazon
Luxembourg

- Architected an autonomous AI Agent swarm (agentic workflow) using Strands and MCP servers to automate the “Volume Loss to Caps” bridge, optimizing human-in-the-loop workflows and saving **109,500 man-hours annually** (est. **\$8.2M+ cost reduction**).
- Developed a centralized Goal Tracking platform (React, DynamoDB) for 130+ users, automating 500+ Director-level targets and reducing cross-team alignment latency by **70%**.
- Developed an AI agent using Strands and MCP servers to retrieve metrics and automatically generate weekly WBR narrative bridges, saving **5+ hours per week** for L6 leadership and automating manual reporting workflows.
- Engineered a VP-sponsored full-stack KPI management engine using React and AWS DynamoDB to provide organization-wide transparency and resolve cross-functional reporting silos.

Software Developer Engineer Intern
Feb 2024 - Aug 2024
The Goodyear Tire & Rubber Company
Luxembourg

- Built a full-stack LDF testing visualization tool (React, FastAPI) integrating ANOVA statistical tests to automate tire performance comparisons and identified significant R&D insights.
- Designed and implemented robust data pipelines at scale (AWS Athena, SQL) to process, transform, and clean massive tabular datasets of global tire test results for performance science teams.

SKILLS

Languages	Python, SQL, TypeScript, JavaScript, Java
Data & ML	PyTorch, Pandas, Computer Vision, NLP, Data Pipelines, LLMs, ANOVA
Back-End & Infra	AWS (Athena, DynamoDB, S3, Lambda), Docker, Airflow, FastAPI
Agentic	Agent Orchestration (Strands), MCP Servers, Human-in-the-loop workflows

EDUCATION

Master of Computer Science and Engineering, Instituto Superior Técnico
2022 - 2024
- Relevant Coursework: Deep Learning, Data Analysis & Integration, Decision Support Models, Information Visualization.

Master Thesis: Recognising Portuguese Stones with Deep Learning.
- Designed and trained Computer Vision models using PyTorch; preprocessed and curated image datasets.

Erasmus, Computer Science & Data Science, University of Würzburg
2023
- Relevant Coursework: Topics in Data Science, Data Science.

Bachelor of Computer Science and Engineering, ISCTE - IUL
2019 - 2022