# **Achilleas Leivadiotis**

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### **ABOUT ME** (achilleasleivadiotis.com - Portfolio)

I am a Data Science and Artificial Intelligence graduate with a passion for building full-stack applications, machine learning, computer vision. My background spans freelance projects, AI-driven research projects, and software development internships. I thrive on crossfunctional collaboration, love tackling complex analytical challenges, and aspire to create impactful tech solutions.

#### **WORK EXPERIENCE**

Software Developer, Freelance Commercial Website (construction-company-gamma.vercel.app)

July 2025- Sep 2025

- Tech Stack: Next.js, TypeScript, Prisma, PostgreSQL, Stripe, Supabase, Vercel
- Built entirely from Scratch (Done 80-90%)
- Built enterprise-grade booking system handling real-time availability and payments
- Implemented auth, admin dashboard, property listings, CMS, image optimization, and SEO

AI Research & Development, EUROCONTROL MUAC, Computer Vision, Thesis Grade 9/10

Feb 2025 - July 2025

- Project Focus: Enhancing aviation environmental efficiency by developing and refining machine learning models for contrail detection and real-time tracking and flight attribution.
- Technical Stack: Utilizing **Azure Databricks** for scalable data processing and Apache Spark for distributed computing, integrated within Microsoft's Azure ecosystem. Frameworks: Utilizing **Detectron2** for detection and **deepSORT** for tracking.
- Model/Algorithm Development: Leveraging and fine-tuning pre-existing models, specifically enhancing Detectron2 for improved instance segmentation accuracy. Implemented precise flight-attribution algorithms linking detected/tracked contrails to specific flights.

Marketing Manager, SCOPE Maastricht

Sep 2024 - March 2025

• Led marketing for an international Dublin tech & sales trip; cross-team coordination; boosted attendance & sponsorship.

Software Developer Intern, Next Generation Sensors B.V.

June 2024 - August 2024

- Tech Stack: TypeScript, Angular, MongoDB: Built a new website including support pages, authentication systems, admin dashboards, and client messaging tools.
- Implemented secure RESTful APIs and database schemas to handle user data efficiently.

## PROGRAMMING / AI PROJECTS ( 3 Main )

I've worked on diverse AI and software engineering initiatives, ranging from a 3D MEP Component Location Predictor (for placing mechanical/electrical/plumbing parts in Revit models) and an AI Image Detector (flagging AI-generated images), to a UNO Bot (with Monte Carlo and neural-network strategies) and an Image Recognition Hackathon. I also developed a rocket simulation with physics engines and a Graph Chromatic Number solver(JAVA).

Multiplayer Card Game ( card-game-nine-kohl.vercel.app )

Mar 2025 - April 2025

- Tech: Real-time WebSockets, Node.js Server, State Management, Vercel Deployment
- Architected real-time multiplayer game supporting concurrent sessions
- Built robust server handling game state, player synchronization, and disconnect recovery
- Clean separation of game logic, networking, and UI layers

3D MEP Component Location/Type Predictor, Equans S.A.S (Group Project 3-1)

Sep 2024 - Jan 2025

- Built a proof-of-concept AI system that automatically places MEP (Mechanical, Electrical, Plumbing) components in a 3D Revit building model, predicting both (x,y,z) coordinates and type.
- Implemented specialized training loops with distance-based loss functions to quantify placement errors, successfully demonstrating the feasibility of an AI-driven approach to MEP component placement.

Al Image Detector, Maastricht University Group Project 2-2, Grade: 9.5/10

Mar 2024 - Jul 2024

Developed Convolutional and residual neural networks, with a front-end interface to upload images and view heatmaps of
detection results to detect whether an image is AI generated.

#### **EDUCATION**

Maastricht University, Data Science s Artificial Intelligence Bachelor Grade: 7.16/10 2025

Graduated - June

Completed Modules: Calculus (9), Computer Security (9), Data Structures and Algorithms (9), Databases (7), Human Computer Interaction & Affective Computing (10), Introduction to Bio-Informatics (8), Large Scale IT and Cloud Computing (8), Machine Learning (6), Probability and Statistics (7), Simulation and Statistical Analysis (7), Software Engineering (7) & More.

University of New Hampshire, Project SMART - Biotechnology, Online summer Program

July 2020

• Focused on hands-on lab techniques, genetics, and molecular biology.

## Anatolia College High School

Sep 2019 - July 2022

• IB Diploma Program (2020-2022) and Lyceum/MYP Program prior.

#### **OTHER**

Languages / Programming: Greek (native), English (fluent), SQL (expert), REST API, MATLAB (expert), HTML (expert), CSS (expert) Data Science/Al Libraries: Pandas, NumPy, scikit-learn, PyTorch, TensorFlow, OpenCV.

Version Control: Github, Gitlabs.

LLM tooling: (OpenAI/ChatGPT, Claude, Gemini; CLI & API, function calling, RAG, agents, evals)

Interests / hobbies: Chess, playing piano, playing guitar, swimming, traveling, spearfishing, fishing, cycling, exploration