

Santiago Garcia Sapeta

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EDUCATION

Stanford University - International Honors Program in Computer Science & Electrical Engineering

Core Modules: Machine Learning, Deep Learning & Neural Networks, Systems Engineering, Digital Hardware Design, Embedded Systems, Signal Processing, Advanced Algorithms

2026 Stanford, CA

Bachelor of Science (B.S.) in Software Engineering, CODE University of Applied Sciences

Core Modules: Software Development, Artificial Intelligence, Machine Learning, Essential Mathematical Methods, Algorithms and Data Structures

Aug. 2024 - Present
Berlin, Germany

Spanish Baccalaureate CIDEAD – Science Track

Focused on mathematics, physics, chemistry, and technical subjects under the Spanish Ministry of Education.

Sep. 2020 - May. 2024
Madrid, Spain

Full-Stack Developer 1:1 Coaching with IT expert Piotr Kania

Gained hands-on experience delivering real-world projects, with a strong focus on clean code, problem-solving, and industry best practices. Core Elements: full stack development, artificial intelligence and machine learning, clean code, problems solving and real world projects.

Jun. 2022 - Jun.2024
Remote/Cracow, Poland

Meta - Full-Stack Developer Certificate,

Focused on modern full-stack development including frontend and backend technologies, APIs, version control, and deployment. Emphasis on industry best practices, scalable applications, and real-world project development.

Jan. 2026 - March.2026
Remote/Berlin, Germany

EXPERIENCE

MantAI, Inc. - Co-Founder & CTO,

Building an end-to-end predictive maintenance platform powered by custom hardware and machine learning. MantAI detects mechanical faults before they occur by analyzing vehicle sounds through proprietary MEMS microphone hardware and CNN-based audio classification models — enabling logistics companies and fleet operators to reduce maintenance costs month over month.

- Designed and engineered custom IoT hardware prototypes using microphones, and MicroSD data logging modules for field audio capture.
- Framed early fault detection as an anomaly-detection problem on healthy-baseline audio embeddings, using reconstruction error and Mahalanobis distance in the AST latent space to flag out-of-distribution mechanical signatures — critical given the scarcity of labeled failure data.
- Architected and trained CNN-based audio classification models using transfer learning on AudioSet-pretrained transformers (AST), fine-tuned on labeled vehicle fault sound datasets.
- Built a full-stack real-time dashboard for visualizing diagnostic data, fault alerts, and vehicle health metrics, integrating hardware telemetry with a web-based interface.
- Led all technical decisions across hardware, ML pipeline, and software — from PCB prototyping to cloud deployment.

April. 2026 – Present

Full-Stack Software Engineer, LoadUp GmbH

AI-driven logistics company focused on optimizing transport and operational efficiency through intelligent systems

- *Lead development of key internal and customer-facing platforms, including Fahrernetz and core LoadUp logistics systems*
- *Build and maintain full-stack features across the platform, ensuring scalability, performance, and clean architecture*
- *Design and implement responsive, user-centric interfaces tailored to complex logistics workflows*
- *Develop and integrate APIs to support real-time data flow across logistics, driver management, and operational tools*
- *Collaborate cross-functionally to deliver high-impact solutions aligned with business and operational goals*
- *Apply best practices in clean code, system design, and maintainability across a rapidly evolving product ecosystem*

*Sep. 2025 – April. 2026
Berlin, Germany*

Raumdeuter - Machine Learning Engineer,

Full-time Owned ML models end-to-end — from feature engineering to training, evaluation, and production deployment. Built leakage-safe, group-aware validation with cost-sensitive metrics (PR-AUC, per-class recall) over headline accuracy, and shipped drift monitoring with automated retraining to keep models reliable in production.

Aug 2025 - Sep 2025

Lead Engineer - Full-Stack developer (Contract via MyCard Sp. z o.o.)

Zero Waste Consulting Sp. z o.o.

- *Led frontend development of an AI-powered ESG emissions platform for enterprise clients, supporting GHG Protocol-compliant Scope 1, 2, and 3 reporting.*
- *Owned the user experience from concept to deployment—designing clean, accessible, and responsive interfaces tailored to complex emissions workflows.*
- *Architected a modular, scalable UI system using modern web technologies to support localization, industry-specific logic, and evolving compliance needs.*
- *Directed integration of AI-driven tools for parsing and visualizing unstructured input (e.g., invoices, spreadsheets), streamlining user workflows.*
- *Collaborated with cross-functional teams—climate experts, designers, and backend engineers—to ensure audit-readiness and regulatory alignment.*
- *Developed a reusable component library and design system for rapid prototyping, multilingual support, and consistent branding across the platform.*

*May. 2025 – Aug. 2025
Warsaw, Poland*

Software Engineering Intern at MyCard

Designed and developed the frontend of a custom emissions calculator called Envista for Zero Waste Consulting, focusing on intuitive user experience and responsive interface. Collaborated closely with the team to ensure seamless integration and accurate data visualization.

*April.2025 - May. 2025
Warsaw, Poland*

PROJECTS

MantAI | Hardware-Development, Python, PyTorch, CNN, React, Next.js, Node.js

<https://www.mantai.io/>

End-to-end predictive maintenance platform for fleet and logistics companies. Built custom IoT hardware for real-time vehicle audio capture, trained CNN-based audio classification models to detect mechanical faults before they occur, and developed a full-stack dashboard to visualize diagnostics, fault alerts, and vehicle health metrics.

- *Engineered custom hardware prototypes using ESP32-S3, INMP441 I2S MEMS microphones, and MicroSD logging modules for field audio capture.*
- *Trained CNN audio classification models with transfer learning on AudioSet-pretrained transformers (AST), fine-tuned on labeled vehicle fault datasets.*
- *Built a real-time web dashboard integrating hardware telemetry, fault detection alerts, and fleet health metrics.*

Fahrernetz | React, Next.js, Tailwind CSS, Node.js, Express.js, PostgreSQL

Fully automated hiring platform for logistics companies, built during my time at LoadUp GmbH. Streamlined the end-to-end recruitment process from job listing to applicant matching.

- Built a dynamic job and company listing system tailored to the logistics industry.
- Developed an automated application flow with structured candidate profiles and submission tracking.
- Implemented an applicant matching percentage engine to surface the most relevant candidates per role.
- Designed a clean, responsive UI optimized for both recruiters and job seekers.

LoadUp Portal | React, Next.js, Tailwind CSS, Node.js, Express.js, PostgreSQL

Internal and customer-facing platform built for LoadUp GmbH, an AI-driven logistics recruiting company connecting truck drivers and logistics professionals with employers across Germany.

- Built and maintained core portal features including candidate profiles, job listings, and employer dashboards used by logistics companies across Germany.
- Developed applicant tracking and management flows, giving recruiters full visibility from application to hire in a single interface.
- Integrated real-time data pipelines to surface driver availability, application status, and operational metrics across the platform.
- Ensured scalability, performance, and clean architecture across a rapidly evolving product used by 36,000+ active drivers.

Envista Ai | React, Next.js, Tailwind CSS, GSAP, Framer Motion

AI-powered ESG emissions calculator for enterprise clients, enabling automated Scope 1–3 reporting aligned with the GHG Protocol. Focused on building dynamic, multilingual interfaces, scalable form systems, and seamless user workflows for data ingestion and reporting.

- Designed and implemented the full UI of the GHG emissions calculator with a focus on clean design, smooth animations, and an intuitive user experience.
- Built a responsive, modular Emissions Report generator, enabling enterprise users to create GHG Protocol-compliant Scope 1, 2, and 3 reports across devices.
- Developed a modern, conversion-optimized landing page for Zero Waste Consulting (2025) featuring strong visual design, clear calls to action, and integrated demo booking.

NonchaFit | React, Next.js, Tailwind CSS, GSAP, Framer Motion

- Designed and built a responsive fitness app with a focus on sleek UI/UX and intuitive interaction. Features include personalized workout planning, progress tracking, and adaptive recommendations based on user goals.
- Developed using React, Next.js, and Tailwind CSS with attention to clean design, smooth transitions, and mobile-first usability.

Technical Skills

Languages: JavaScript, Python, SQL (Postgres), Java, C, C++, C#, PHP, Swift, HTML/CSS

Frameworks: React, Node.js, Express.js, Next.js, TailwindCSS, Flask, WordPress, SwiftUI, PyTorch, torchaudio, librosa, TensorFlow, Scikit-learn, Apache Spark, Pandas, NumPy

ML & AI: CNN architecture design, transfer learning, AudioSet AST, spectrogram feature extraction, mel-filterbank processing, model fine-tuning, audio classification pipelines, dataset labeling & augmentation, neural networks, full-stack ML, data lakes

Developer Tools: Git, Docker, Elasticsearch, Jupyter, MATLAB, Bash, Linux, ESP32-S3, I2S/SPI protocols, MicroSD logging

Cloud (AWS): EC2, EMR, ECS, Athena, Lambda Designing Tools: Figma, Adobe After Effects, Framer Motion, Procreate