

Mihai Lache

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EDUCATION

Maastricht University

Master of Science in Artificial Intelligence

Expected June 2027

Maastricht, Netherlands

University of California Santa Cruz

Bachelor of Science in Computer Science

September 2021 - June 2025

Santa Cruz, CA

- Relevant Coursework: Data Structures Algorithms, Distributed Systems, Computer Networks, Machine Learning

Computer Science Study Abroad: Tokyo, Japan

University of Tokyo

July 2023 – September 2023

Tokyo, Japan

EXPERIENCE

Software Engineering Intern

Winfo

June 2025 – September 2025

Bucharest, Romania

- Built **Flask REST APIs** connected to **Oracle Cloud** databases to serve normalized ERP data with filtering and pagination for analytics dashboards.
- Developed **Python ETL scripts** using **pandas** and **SQLAlchemy** to extract CRM data from REST APIs and load it into **PostgreSQL**.
- Added structured **logging and exception handling** in Python microservices to trace ETL status, API errors, and runtime performance.
- Created automated **data validation checks** in **pandas** to ensure consistency between Oracle ERP and PostgreSQL records.

Software Engineering Intern – Data Systems

Avid Bioservices

June 2024 – August 2024

Tustin, CA

- Rebuilt a legacy **Python ETL pipeline** to automate data ingestion from lab instruments and internal **REST APIs** into a centralized **PostgreSQL database** orchestrated with **Airflow**.
- Implemented automated **data and integration tests** using **pytest** and **GitHub Actions** to validate ETL logic and ensure schema consistency before production deployment, reducing data load errors.
- Configured and deployed **Airflow DAGs** on **AWS EC2** instances to orchestrate and monitor scheduled data pipelines, improving system reliability and reducing manual intervention.

PROJECTS

FleetLink – Live Vehicle Fleet Management | *React, TypeScript, AWS (Cognito, Mapbox, Lambda, RDS, S3/CloudFront)*

- Built a full-stack web application that simulates vehicle delivery fleets in real time, allowing users to add vehicles, assign delivery packages, generate optimized routes, and track progress on an interactive map.
- Designed and deployed a **cloud-native serverless architecture** using **API Gateway + AWS Lambda** for REST APIs and **Amazon RDS (Postgres)** for persistent storage.
- Implemented secure, multi-user authentication and data isolation using **Amazon Cognito**.
- Deployed frontend on **S3 + CloudFront**, provisioned with **AWS CDK (TypeScript)**, and automated CI/CD via GitHub Actions.

Savour: Recipe Management App | *Vue.js, Firebase, Google Cloud Functions*

- Built a full-stack social platform for sharing and discovering recipes with **Vue.js** and **Firebase backend**.
- Implemented **user authentication**, recipe tagging, and live data synchronization using **Firebase Realtime Database**.
- Deployed serverless **Google Cloud Functions** to handle recipe uploads, user interactions, and notification triggers.

Streakify: Habit Tracking App | *SwiftUI, Google Firebase*

- Leader of the development team for "Streakify", an iOS app for tracking daily habits and visualizing progress.
- Integrated **Firebase Authentication** and **Cloud Firestore** for real-time data storage and progress updates.
- Led weekly **scrum meetings** and **code reviews** to ensure timely delivery and clean architecture.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, SQL, Swift, C/C++, HTML/CSS

Frameworks/Libraries: React, Next.js, Django, Flask, Node.js, Tailwind CSS

Tools & Platforms: AWS (Lambda, EC2, S3), Docker, Git, PostgreSQL, Firebase, Wireshark, TLS/SSL