# ANII. SAYAR

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# EDUCATION

**Marmara University** 

Bio Engineering, Dual Diploma

Istanbul, Turkey

2023 - 2027

**International University of Sarajevo** 

Sarajevo, Bosnia and Herzegovina

2023 - 2027

Genetics and Bio Engineering, Dual Diploma

## EXPERIENCE

# **Co-Founder & Lead Software Developer**

2022 - Present

Remote

Neo Stellar Ltd.

- · Developed a ROS2 flight controller and ground control station software for unmanned aerial vehicles • Implemented a company intranet for the company with Kubernetes with Cloudflare Zero Trust.
- Published an AI powered SaaS research assistant using Spring, React with established codebase via Git.
- Automated deployment pipelines with Gitlab CI/CD, Kubernetes and Docker.
- Gained expertise in communication of aerial vehicles
- Gained experience in QT/QML and Python for ROS2 flight controller and ground control station.

# Software Developer & Founder

Sep 2024 – Present

Remote

• Explored methods to automate deployment pipelines to handle 1K+ users in production environment

- · Built an AI Powered microservice Spring infrastructure in Java to make research easier for students
- Gained experience in React with Typescript for user experience
- Deployed and managed Scienvera as scalable microservices on Kubernetes

#### **PROJECTS**

Scienvera

# Scienvera - AI-Powered Academic Search Engine | Java, Kubernetes, Spring, React

Sep 2024 - Present

scienvera.com

- Designed a vector-based semantic search pipeline using sentence-transformers and cosine similarity for matching research abstracts
- · Utilized Redis for caching results and optimized latency under high-concurrency academic search loads
- Integrated Spring Cloud Gateway and Kubernetes for service routing, discovery, and failover in a distributed microservice setup
- · Configured CI/CD pipelines using GitLab CI/CD and Docker to enable rapid, automated deployments
- · Implemented full-stack authentication with OAuth2 and JWT to protect API endpoints and user data

# AvaSYS2 Ground Control System | C++, Qt6, GStreamer, OpenCV, MAVLink

Apr 2025 - Aug 2025

Github Link

- Developed a modular ground control application in C++/Qt (QML frontend & C++ backend) with a real-time dashboard for drone telemetry and live video streaming
- Integrated MAVLink protocol over UDP and Serial using a custom Mavlink Manager class to handle commands (arm/takeoff/RTL) and telemetry updates for multiple vehicles
- Implemented video ingestion pipeline using GStreamer and OpenCV to decode H.264 streams and render them via OQuickPaintedItem in the UI
- · Built networking layers to authenticate and transmit telemetry data to Teknofest server with OpenSSL-secured HTTP.
- Designed reusable QML components (CompassGauge, StyledGauge, main/panels) with live-updating vehicle state using Qt signal-slot interop.
- Configured build system using CMake to manage dependencies (Qt6, OpenCV, GStreamer, MAVLink, OpenSSL) and support cross-platform builds.

## TECHNICAL SKILLS

Languages: Java, C++, Python, C#, SQL (Postgres), JavaScript

Frameworks & Libraries: React, Spring & Spring AI, Node.js, Selenium, WPF, JUnit, Qt/QML, ROS2, WordPress

Tools & Platforms: Git & Gitlab, Kubernetes, Docker, Gazebo, LaTeX

# Honors & Competitions

# Finalist – Savaşan IHA Category | Teknofest 2025

May 20 - July 18

#### Github Link

- Achieved all technical milestones and qualified for finals; disqualified only due to hardware failure before video submission
- Developed GPS pursuit and QR code guided "kamikaze" mission algorithms using Qt/QML and ROS2 for flight control
- Created a Teknofest replica server with Java to simulate real competition servers and share vehicle data for the AvaSYS ground control system