ANIL SAYAR

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EDUCATION

Marmara University — Istanbul, Turkey
B.S. in Bioengineering (Dual Diploma) — *2023 – 2027*

International University of Sarajevo — Sarajevo, Bosnia and Herzegovina
B.S. in Genetics Bioengineering (Dual Diploma) — *2023 – 2027*

PUBLICATIONS & RESEARCH

AI-Driven Molecular Stratification of Sarcoma | **PyTorch, Python, R, PharmacoGx** — Manuscript Prep
Research manuscripts are not available until publication.

- Stratified 213 TCGA patients and identified a high-risk sarcoma cluster (median survival 21.6 vs. 35.4 months) using a custom Transformer-Based Gated Multi-Omic Autoencoder integrating RNA, CNV, protein, and mutation data.
- Validated the subtype as a robust, independent prognostic factor (HR=2.57, p=0.01) via Multivariable Cox Regression, demonstrating high reproducibility across 100 bootstrap models (ARI=0.78).
- Utilized TIDE to characterize a proliferation-driven, immune-suppressive phenotype, revealing that significantly elevated MDSC infiltration (p=0.011) partially mediates adverse mortality outcomes.

Comparison of Multi-Omic Fusion Architectures for Breast Cancer Classification | *Python, Transformers* — Manuscript Prep
Research manuscripts are not available until publication.

- Developed a Gated Cross-Attention Network achieving 92.8% accuracy in BRCA subtype classification.
- Benchmarked performance against MLP and Transformer baselines, demonstrating the superiority of feature-wise gating for resolving ambiguities between Luminal A and B subtypes.

EXPERIENCE

Co-Founder & Lead Software Developer — 2022 – 2025
Neo Stellar Ltd. — *Remote*

- Developed a ROS2 flight controller and ground control station software for unmanned aerial vehicles with Qt/C++ and Python
- Implemented a company intranet and automated deployment pipelines for the company with Gitlab CI/CD, Kubernetes with Cloudflare Zero Trust.

Software Developer & Founder — Sep 2024 – Sep 2025
Scienvera — *Remote*

- Explored methods to automate deployment pipelines to handle peak loads in production environment
- Built an AI Powered microservice Spring infrastructure in Java to make research easier for students
- Deployed and managed Scienvera as scalable microservices on Kubernetes

PROJECTS

Scienvera – AI-Powered Academic Search Engine | *Java, Kubernetes, Spring, React* — Sep 2024 – Sep 2025
alpha.scienvera.com

- Designed a vector-based semantic search pipeline using sentence-transformers and cosine similarity for matching research abstracts with Redis to caching results and optimizing latency.
- 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

Savaşan IHA Finalist – AvaSYS2 Ground Control System | *C++, ROS2, Qt6, OpenCV, MAVLink* — Apr 2025 – Aug 2025
AvaSYS2 Github Link – Teknofest Replica Server Github Link

- Achieved all technical milestones and qualified for finals; disqualified only due to unidentified external interruption before video submission
- 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
- 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 GCS

TECHNICAL SKILLS

Bioinformatics: PyTorch (Deep Learning), R (PharmacoGx, TIDE), Survival Analysis (Cox/KM), Multi-Omic Integration
Languages: Java, C++, Python, R, C#, SQL, TypeScript
Frameworks: Spring Boot, React, Hibernate, Qt/QML, ROS2, OpenCV, GStreamer
DevOps & Tools: Kubernetes, Docker, GitLab CI/CD, Git, Linux, LaTeX

REFERENCES

Prof. Dr. KAZIM YALÇIN ARGA — *Department Of Bioengineering*
Marmara University