Beyza KAYA

Address: Çekmeköy İstanbul/TURKEY **Mobile:** +90 532 175 55 76

E-mail: beyza.kaya@ozu.edu.tr

OBJECTIVE	To contribute to cutting-edge research in bioinformatics, leveraging expertise in artificial intelligence, computational biology, and genomic data analysis, while further developing advanced skills in modeling biological systems.
EDUCATION	**ÖZYEĞİN UNIVERSITY -** Istanbul, TURKEY (2024 - Present) **Graduate School of Engineering and Science - Master's in Artificial Intelligence** **Honors:** 100**%** Scholarship **ÖZYEĞİN UNIVERSITY** - Istanbul, TURKEY (2019 - 2024) **Faculty of Engineering - Department of Industrial Engineering –** Completed in 3.5 years **Department of Computer Science Engineering (Double Major)** **Honors**: 50% Performance Scholarship **Cumulative GPA**: 3.38/4.00 **PAMUKKALE EGITIM VAKFI HIGH SCHOOL** - Denizli, TURKEY (2015 - 2019)
EXPERIENCE	**DELTAV SPACE TECHNOLOGIES** - Istanbul, TURKEY (07/2023 - 08/2023) **Position:** Intern, Project Management ♦ Analysed risk accordance with standards ♦ Planned project with detailed excel project for automation ♦ Predicted GPS latitude-longitude over IMU/ GPS data via Tensorflow and Keras **UP SCHOOL** - Istanbul, TURKEY (11/2022 - 12/2022) **Position:** Intern, Social Media Organizer ♦ Shared daily posts, videos and announcements on social media ♦ This internship was part of the Young Guru Academy's initiatives **SNI TECHNOLOGY** - Istanbul, TURKEY (06/2022 - 08/2022) **Position:** Intern, Java Developer ♦ Observed reflections of security systems on e-archive billing applications with Spring Framework ♦ Used the Spring Framework for email verification and wrote register services **POILABS** - Istanbul, TURKEY (6/2022 - 10/2022) **Position:** Intern, Backend Developer ♦ Wrote newly defined JavaScript features for hardware to use in shopping centers ♦ Participated project meetings on the integration of the company device for new airport
PROJECTS & RESEARCH STUDIES	**ÖZYEĞİN UNIVERSITY -** Istanbul, TURKEY (2024-Present) **Position:** Research Assistant **Research Paper:** "Temporal Expression Prediction by Integrating Genome Dynamics via Spatio-temporal GNNs" (Under Review) **Authors:** Beyza Kaya, Emre Sefer ♦ Proposed STEPmr and STEPmi, two spatio-temporal graph neural network models to predict mRNA and miRNA expression dynamics over time. ♦ Integrated Hi-C–derived spatial gene interaction features with temporal expression profiles to model gene regulatory dependencies. ♦ Analyzed gene ontology and biological pathway enrichments to interpret model predictions, identifying gene groups related to signaling, transcriptional regulation, and structural organization as key contributors to model behavior. ♦ Source code available at: https://github.com/seferlab/temporalgene **ÖZYEĞİN UNIVERSITY -** Istanbul, TURKEY (2024-Present) **Position:** Research Assistant **Research Paper:** "GAT-HiC Efficient Reconstruction of 3D Chromosome Structure via Graph Attention Neural Networks" (Accepted by IEEE Transactions on Computational Biology and Bioinformatics) **Authors:** Beyza Kaya, Emre Sefer ♦ Developed GAT-HiC, a novel graph neural network model combining Node2vec and graph attention mechanisms to predict 3D chromsome structures. ♦ Designed specialized loss functions to enhance generalization tasks across diverse species and datasets. ♦ Validated model performance across three Hi-C interaction datasets, demonstrating generalizability compared to existing methods. ♦ Source code available at: https://github.com/beyzoskaya/GAT-HiC
VOLUNTARY ACTIVITIES	

	ÖZYEĞİN UNIVERSITY - Istanbul, TURKEY (2023 - 2024)
	Position: Senior Design Project Computer Science
	♦ Deploy Generative models for create NFT images & Create big data for deploy diffusion models
	♦ Integrate rarity score to Diffusion model to create rare NFT images
	ADEL KALEMCILIK - Istanbul, TURKEY (2022)
	Position: Senior Design Project Industrial Engineering
	♦ Detected bottleneck for detailed production line with Arena Simulation Model
	YOUNG GURU ACADEMY - Istanbul, TURKEY (2019 - 2021)
	Position: Project Leader
	♦ Led "Develop Business Model" sessions for 5th & 6th grade students to support their development
	♦ Participated in camps on leadership, teamwork, communication, problem-solving, decision-making.
	Position: Science Activities Volunteer
	♦ Organized sessions with elementary school students in village schools with no access to education.
	♦ Utilized "Twin" science kits and conducted experiments in groups.
	Position: Summit Volunteer
	♦ Dealt with the speakers and attendees and took part in various preparations during the summit.
	♦ Produced creative content and created videos for YGA's Instagram and TikTok accounts.
SKILLS & CERTIFICATES	**COMPUTER SKILLS** ♦ Spring Framework (Intermediate) ♦ MS Office (Word, Excel, Power Point) ♦ Tensorflow (Intermediate) ♦ Java (Intermediate) ♦ PyTorch (Intermediate) ♦ C++ (Intermediate)/C (Intermediate) ♦ Python (Intermediate) **LANGUAGE SKILLS** **CERTIFICATES** ♦ Written and oral fluency in English PyTorch for Deep Learning Bootcamp
EXTRACURRICULAR ACTIVITIES	♦ Member, Ozyegin University Google Developer Club (2020 - 2023) ♦ Member, Ozyeğin University SAS Club (2019 - 2021) ♦ Member, Ozyeğin University Business Club (2019 - 2021) ♦ Member, Ozyeğin University Operations Research Club (2019 - 2021) ♦ Member, Ozyeğin University Dance Club (2019 - 2020) ♦ Volleyball: Denizli Belediyespor Club Volleyball Team player (2013 - 2019)
PERSONAL INFORMATION	**Birth Date:** 06/06/2001 **Driver's License:** B Class
REFERENCES	Available upon request