Saad Yousuf

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EDUCATION

Middle East Technical University-Honor Graduate **2018 – June 2023**
BSc in Computer Engineering/Minor: Molecular Biology & Genetics - ***CGPA - 3.42*** *Ankara, Turkey*

WORK EXPERIENCE

Research Internship at Sabanci University | Pytorch/Image Segmentation **Aug 2023 – Sept 2023**
- Working on identifying and detecting neural cells from microscope image dataset(instance segmentation).
- Understanding common models and their applications: U-net and Mask R-CNN along with loss analysis employing IoU(Intersection over Union)

NanoDems Mobile App Developer | React Native/Firebase **October 2022 – June 2023**
- Worked on full-stack React Native android project involving ML object recognition(YOLO) of road pitholes, user authentication database alongside a backend at Firebase
- Final year project for graduation

Arçelik IoT Division ODTÜ Teknokent | React/JS/AWS **July 2022 – September 2022**
- Worked on full-stack web project involving React along with AWS Lambda, DynamoDB & API Gateway at the backend

METU Kovan SWARM Robotics Lab | ROS/Python/C++ **Aug 2021 – May 2022**
- Optimized and advanced an existing ROS(Robot Operating System) based multi-drone management system GUI via Qt
- A* & RRT Algorithms for pathfinding computation and Drone Simulation/Aggregation/Movements
- PyQt-Pixhawk, ArduPilot, Gazebo and Unreal Engine for Drone Visualisation and simulation
- Learnt to efficiently follow DevOps Procedures and create Docker Packages for core softwares for easy deployment

Arçelik Embedded Electronics Division | OpenCV **July 2021**
- Fresh Start Internship Program-part of a selected few students for this prestigious program
- Optimized and advanced an existing People counting mechanism for CCTV cameras using OpenCV frameworks
- Designed React Native app with Google ad-services with focus on Arçelik

Sparse Technology/ODTÜ-VENT | Python/Arduino/Mechanical Control **Feb 2020 – Sept 2020**
- ODTÜ's first engineering team based on providing Ventilator solutions for the COVID-19 pandemic
- Started an Emergency Ventilator supported by SparseTech as well as a Commercialized Ventilator Project along with a team of Mechanical Engineering graduates
- Optimized and advanced an existing commercial BVM(bag valve mask) based ventilator
- Involved in Raspberry Pi 4, stepper motors as well as commercial analogue pressure and flow Sensors

RELEVANT RESEARCH

ITM WORKFLOW for handling sc-RNA sequencing isoform analysis **Aug 2020 – June 2021**
Submitted as part of CENG 488 Course: Undergraduate Research (June 2021)
- Supervised by Prof. Tolga Can from Dept. of Comp.Engineering to carry out **single cell RNA sequencing analysis as part of Bioinformatics(article available on Github).**
- PCA(Principal Component Analysis) plots for multidimensional DNA data(many genes) employed to find clusters and genes of interest

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, SQL, R, OpenCV, PyTorch for ML, React-Native Apps
Developer Tools: VS Code, Android Studio, Intellij Idea
Tech: Linux, GitHub, Git, Flutter

EXTRACURRICULARS

- Native English and Urdu Speaker, as well up to A2 Turkish, with an overall IELTS 2020 Band 8.
- COFOUNDER of YabanCCs, the existing METU's Turkish Computer Club's International Wing, Ankara
- VICE PRESIDENT METU International Students Association, Ankara, Academic Year 2018-2019