RASUL YERMAGAMBET

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EDUCATION

Master of Science in Robotics, Nazarbayev University **Aug 2021 - May 2023**
CGPA: 3.42/4.00
Relevant Coursework (Grade): Deep Learning (A, Big Data Analytics (A-), Robot Perception and Vision (A-), Brain-Machine Interfaces (A-), Hardware-Software Co-design (A-), Acquisition and Analysis of Biomedical Data (B), Computer Vision (B)

Bachelor of Engineering in Mechanical Engineering, Nazarbayev University **Aug 2017 - May 2021**
Extracurricular activities: President of Institution of Mechanical Engineers Student Chapter in Nazarbayev University

EXPERIENCE

Graduate Research Assistant **Feb 2022 - Present**
Tactile Laboratory, Nazarbayev University *Astana, Kazakhstan*

- Created environment for control and communication of sensors, Schunk gripper, UR-10 manipulator using ROS, C++, Python in Linux
- Developed method to filter data from event based camera using time window based method on Python(NumPy)
- Analyzed and filtered data from magnetic and vibration sensors using Python (Pandas, NumPy, Matplotib)
- Built regression models to calibrate magnetic sensors using Python's scikit-learn

Software Developer **May 2022 - Jul 2022**
Kazakhstan Aviation Industry *Astana, Kazakhstan*

- Developed a full-stack web application for aircraft maintenance planning workflow using Flask and Bootstrap. A team of 20 people uses it daily to control the workflow in the organization
- Created dynamic CRUD tables using PostgreSQL psycopg2 and dataTables bootstrap
- Deployed the app to Heroku

Maintenance Engineer **Nov 2020 - Jun 2021**
Kazakhstan Aviation Industry *Astana, Kazakhstan*

- Developed an automated system for controlling accounting and aircraft maintenance planning in the organization, and was **awarded a certificate of merit from the company's CEO**. The number of daily finished aircraft maintenance tasks increased to 40%.
- Led team of aircraft technicians

PROJECTS

ERP-based BCI classification. Check here

- Weighted ensemble machine learning models for the classification of ERP-based BCI data using two different algorithms: LDA-SVC-kNN and LDA-LSVC-LR. These models achieved an F-score of more than 90 on two different datasets.
- Visualized and filtered the data using the MNE library.
- The models were trained and evaluated using the scikit-learn and seaborn Python libraries.

Epileptic Seizure Classification. Check here

- Built and compared CNN, LSTM and CNN-LSTM deep learning models for classification of patients with epileptic seizure using Keras.

Action Recognition in Video. Check here

- Trained UCF-Sports and Weizmann video datasets on 2D residual CNN models (ResNet and ResNeXt) with application of Temporary Shift Module (TSM) .

Web Parser GUI. Check here

- Built a parser with a desktop GUI that parses websites and creates text documents from them. The part of a project aimed at delivering data to deaf-blind individuals.

TECHNICAL SKILLS

Programming Languages	Python, C/C++, SQL
Web Frameworks	Flask, Bootstrap
ML Frameworks	Keras, Pytorch
Libraries	numpy, pandas, scikit-learn, matplotlib, seaborn
Developer Tools	Docker, Git

CERTIFICATES

- **NDG Linux Unhatched** Cisco Networking Academy, Linux - 2022
- **Machine Learning for Data Science and Analytics** Verification Link - 2021.
- **Introduction to Cloud Development with HTML, CSS, and JavaScript** Verification Link - 2021.
- **Analyzing Data with Python** Verification Link - 2020.
- **Python Data Structures** Verification Link - 2020.