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-), Hardware-Software Co-design (A-), 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*

- Developed control environment for sensors, Schunk gripper, UR-10 manipulator using ROS, C++, Python in Linux. Increased sensor data sampling rate by 2x.
- Built Python filter to process data from event-based camera, enabling filtering every 100 ms without data loss.
- Calibrated magnetic sensors using scikit-learn and regression models, and stacked four filters to process data from magnetic and vibration sensors using Python (Pandas, NumPy, Matplotlib).

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 with 10 features. The application is used daily by a team of 20 to manage the workflow.
- Created dynamic CRUD tables using PostgreSQL psycopg2 and dataTables bootstrap with average response time of 59 ms.

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

- Developed an automated system for accounting and aircraft maintenance planning that increased daily finished tasks by 40% and **awarded by a certificate of merit from the CEO.**
- Led a team of 10 aircraft technicians.

PROJECTS

ERP-based BCI classification – developed weighted ensemble ML models achieving over 90 F-score on two datasets. Used Python libraries. (Code)

Epileptic Seizure Classification – compared CNN, LSTM, and CNN-LSTM DL models with >95% accuracy and <0.1 loss. Used Keras. (Code)

Action Recognition in Video – trained ResNet and ResNeXt models with TSM on UCF-Sports and Weizmann datasets. Achieved 90% average accuracy, 1% better than baseline. (Code)

CERTIFICATES

- **NDG Linux Unhatched** Cisco Networking Academy, Linux - 2022
- **Machine Learning for Data Science and Analytics** Verification Link - 2021.
- **Analyzing Data with Python** Verification Link - 2020.