Aigerim Keutayeva

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EDUCATION

MS in Robotics, CGPA: 3.63/4.00, Graduated with Honors (top 10%) *August 2021 - June 2023*
Nazarbayev University, Kazakhstan

BS in Robotics and Mechatronics, CGPA: 3.44/4.00 *August 2017 - June 2021*
Nazarbayev University, Kazakhstan

RESEARCH EXPERIENCE

Project: Digital Twin in Additive Manufacturing *June 2022 – June 2023*
Research Assistant *Nazarbayev University, Kazakhstan*

- Implemented and tested machine learning models using Python and relevant libraries such as TensorFlow, Scikit-learn, and Pytorch
- Implemented and tested deep learning models for digital twin in additive manufacturing
- Conducted data preprocessing and feature engineering for deep learning tasks
- Contributed to the writing and presentation of research presentations

Project: Brain-Computer Interface to Exoskeleton System *January 2021 – January 2022*
Research Assistant *Nazarbayev University, Kazakhstan*

- Collected, analyzed, and interpreted data from experiments or simulations
- Implemented and tested deep learning models for BCI using programming languages such as Python and relevant libraries such as MNE, TensorFlow, Scikit-learn, and Pytorch
- Conducted literature reviews and synthesized findings related to BCI

Project: Control systems design for IPMSM in electric vehicles *May 2019 – November 2020*
Research Assistant *Nazarbayev University, Kazakhstan*

- Assisted with the design and execution of research projects related to power conversion and motion control
- Implemented and tested control algorithms using programming languages such as C++ and MATLAB

PROJECTS

Brain-Machine Interfaces: *August – December 2022*

- Designed and implemented an Event-Related Potential-based Brain-Computer Interface classifier using an ensemble model with Linear Discriminant Analysis, Support Vector Classifier, and k-Nearest Neighbor.

Deep Learning: *August – December 2022*

- Implemented a Semi-Supervised Multispectral Scene Classification model with Few Labels using MsMatch, EfficientNet Pytorch, and data augmentations, such as Imagio and Albumentations.

Robot Perception & Vision: *January – May 2022*

- Designed and implemented a Convolutional Neural Network-Long Short-Term Memory model for epileptic seizure recognition using EEG signal analysis.

Machine Learning: *August – December 2020*

- Used Support Vector Machines to improve Netflix's recommendation algorithm.
- Implemented real-time child-centered action recognition using 2D Skeleton joints with 24 OpenPose body key points with Deep Neural Networks, Recurrent Neural Networks, and Long Short-Term Memory.

AWARDS AND ACHIEVEMENTS

- **Dean's List**, Nazarbayev University, Kazakhstan (Fall 2022, Fall 2018)
- **Shell Eco-marathon Asia 2020** (team SunQar), **success in Phase 3** (Spring 2020 - Spring 2021)
- Fostering Research and Innovation Potential **(FRIP) program winner** (Fall 2019)

SKILLS

- **Programming languages:** Python, MATLAB, C++, Java
- **ML and DL frameworks:** TensorFlow, Keras, PyTorch, Scikit-learn
- **Signal processing and data analysis tools:** MNE, BBCI, NumPy, Pandas, Matplotlib, Seaborn
- **Tools and technologies:** Git, GitHub, OpenCV, CUDA, Jupyter Notebook, Anaconda, CoppeliaSim, Django, MySQL