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# Curriculum Vitae

scholar

github

## Education

BSc in Computer Science, Nazarbayev University, School of Science and Technology. *2015 – 2019*

MSc in Computer Science, Nazarbayev University, School of Engineering and Digital Sciences. *2019 – 2021*

## Work Experience

**Web Development Intern**, NIT *Summer 2017*

- Web Development in C#, experience with .NET framework. Coded a real-time chat app much like Telegram Web. (ASP.NET, Dapper, C#)

**Deep Learning Intern**, NXP Semiconductors *Summer 2018*

- Developed a system that predicts a degradation of an audio signal quality using an LSTM network that is trained on Log-Mel spectrograms. (Worked with Keras/Tensorflow)

**Research Assistant** (Brain-Computer Interfaces), Nazarbayev University *2020 – 2021*

- Worked in Matlab doing signal processing of EEG data and applying classical machine learning algorithms like LDA, CSP, CCA ,etc.

**Research Assistant** (Neural Cryptography), Nazarbayev University *2021 – 2023*

- Researched the learnability of the building blocks of the AES cipher (SubBytes, ShiftRows, MixColumns, AddRoundKey) using neural networks. (Worked with PyTorch)

**Machine Learning Engineer**, Cleverest Technologies *2023 – 2024*

- Developed an action recognition system, that notifies when certain events takes place based on real-time CCTV footage. (Python, OpenCV, GStreamer, TensorRT)

**Computer Vision Researcher**, Zennolab *2024 – now*

- Developing complex image recognition, segmentation and verification pipelines. Keeping track of and implementing the latest computer vision research.

## Thesis Research

“**Paradigm-Independent Classification on Multidimensional Neuroimaging Dataset Using Convolutional Neural Networks**”. MA thesis. Nazarbayev University. url: http://nur.nu.edu.kz/handle/123456789/5502. *2021*

- Developed a pipeline that uses Convolutional Neural Networks to extract features that allowed for a classification between Brain-Computer Interface paradigms and individual subject’s intentions based on the EEG data.

## Publications

“**Towards Paradigm-Independent Brain Computer Interfaces**”. *Feb. 2020*
In: 2020 8th International Winter Conference on Brain-Computer Interface (BCI). IEEE. doi: 10.1109/bci48061.2020.9061657.

- Used a new multi-paradigm EEG dataset to investigate the possibility of classification between individual BCI paradigms based on the EEG data. (Python, MATLAB)

“**Camera-Driven Probabilistic Algorithm for Multi-Elevator Systems**”. *Nov. 2020*
In: Energies 13.23, p. 6161. doi: 10.3390/en13236161.

- Developed a discrete simulation of a Multi-Elevator System in Python. (Python, AsyncIO)

**“Hardness of Learning AES with Gradient-Based Methods”** *Oct. 2023*
In: Cryptology and Network Security. CANS 2023. doi: 10.1007/978-981-99-7563-1_6

- Investigated the ability to learn the AES cipher with neural networks.