# Saidnassimov Darkhan

## **Summary**

Self-driven engineer with professional experience in developing and delivering software-based solutions. Interested in automation and digitization of day-to-day applications using state-of-the-art machine learning methodologies.

## **Work Experience**

#### Software Design Engineer, ABB, Helsinki, Finland

Nov 2022 - present

- Designing the architecture of the Energy Management solution back-end.
- Developed anomaly detection and forecasting application plugins for the Energy Management software and maintained its core functionality.
- Development included C# to operate with the RTDB (time-series database), REST API to connect to the python-based API, and bash scripting.

#### Thesis Worker, Metso:Outotec, Espoo, Finland

Jan 2022 - Aug 2022

- Developed an algorithm to recognize real-life equipment items using rendered images of the corresponding 3D models, achieving mAP of 69.57% using a custom industrial dataset.
- Research areas: deep learning, cross-domain object detection, transfer learning, continual learning.

#### Software Developer, Redrakon, Espoo, Finland

Oct 2021 - Jan 2022

- Maintained a computer vision application in a startup environment.
- Deployed an OpenVINO model on a RaspberryPi to collect GDPR-compliant data on audience demographics using Python.
- The company went out of business in early January 2022.

#### Jr. Software Engineer, Raute Oyj, Lahti, Finland

July 2018 - July 2021

- Standardized the industrial data collection system through a thesis project.
- Installed data collection systems in 10+ plywood mills and completed multiple installation visits to customer plants to fix PLC code.
- Completed XY-charger start-ups and Gocator laser calibrations in a team of 3.
- Developed and maintained a C# user interface for a sheet feeder, later used in 2+ customer mills.

#### **Education**

### Aalto University, Espoo, Finland

Sep 2020 - July 2022

- M.Sc. in Automation and Electrical Engineering
- Major in Control, Robotics and Autonomous Systems
- Thesis topic: Equipment identification through image recognition for Metso:Outotec (2022)

#### HAMK University of Applied Sciences, Valkeakoski, Finland

Sep 2015 - Feb 2019

- B.Eng. in Electrical and Automation Engineering
- Exchange studies at the University of Dundee, Scotland, UK (2018)
- Thesis topic: Standardization of MillSIGHTS data collection and reporting system for Raute Oyj (2019)
- Assisted 15+ first-year international and exchange students as a Peer Tutor
- Promoted Finnish education and Finland at Expo 2017 in Astana, Kazakhstan
- Led the official Instagram account of the university

## **Skills**

- Programming Languages: Python, C#.NET, SQL, Matlab
- Technologies: Git, Linux, Azure, Nginx, Step7, TIA, ROS, HTML, CSS, PyTorch, scikit-learn, OpenCV, Detectron2, YOLO, Flask, Rest API, Docker, RaspberryPi, Intel NCS2, OpenVINO, Arduino, Latex, MS Office, time-series databases, bash scripting
- Languages: Kazakh (native), Russian (native), English (fluent, IELTS 7.0), Finnish (B1, YKI-certified)
- Other certifications: Valid Finnish occupational safety card, Driving license (B)