Aleksandr Kuznetsov

LINKS

Github:// **AlKuz**
LinkedIn:// **Aleksandr Kuznetsov**
Codewars:// **AlKuz**

LANGUAGES

Russian: **Native**
English: **B2**
Turkish: **A1**

SKILLS

PROGRAMMING
Python • SQL

DATABASES
PostreSQL (pgAdmin) • MySQL (MySQL Workbench) • SQLite

AWS
Sagemaker • Rekognition • Comprehend • EC2 • Lambda • StepFunctions • API Gateway • SQS • RDS • S3 • SecretsManager • Cloud Watch

DS DOMAINS
CV • NLP • Tabular data

TOOLS AND LIBRARIES
Tensorflow • PyTorch • SKLearn • Pandas • SQLAlchemy • FastApi • boto3 • matplotlib • Streamlit

EDUCATION

WORLD EDUCATION SERVICES
MASTER'S DEGREE, ENGINEERING DIPLOMA EVALUATION FOR CANADA, REF # 5608010
Aug 2022 | Toronto, ON, Canada

SAMARA STATE AEROSPACE UNIVERSITY
PhD, CONTROL SYSTEMS FOR AVIATION AND ROCKET ENGINES, WASN'T DEFENDED
Jun 2020 | Samara, RU

SAMARA STATE AEROSPACE UNIVERSITY
ENGINEER, ROCKET ENGINES
Feb 2015 | Samara, RU

COURSES

- EPAM, inner mentoring program, Reinforcement Learning
- EPAM, inner mentoring program, Natural Language Processing
- EPAM, inner mentoring program, Classical Machine Learning

CAREER SUMMARY

I began my machine learning career in 2016 in a research area, then I began my professional career as a computer vision specialist and Python backend developer. Over time, I worked on different ML projects which are connected to Computer Vision, Natural Language Processing, and some experience with classical tabular data. Right now I am actively learning Reinforcement Learning mostly for my personal interest. The main domains are industry, healthcare, and several projects with finance including investment analytics for my pet project. Regarding cloud providers, I prefer to use AWS to build Machine Learning and Data Processing pipelines based on serverless technologies. From a management skill perspective, I have experience in leading small Data Science teams and customer communication to make the process as clear as possible for them. Gained a lot of experience working with AWS cloud technologies. Now I plan to build my career in the Machine Learning Architect direction.

EXPERIENCE

EPAM
| SENIOR DATA SCIENTIST
Jun 2022 – Present | Izmir, TR

- Researched different approaches to improve model quality, including NLP RL approach
- Closely worked with customer managers to follow them through the Data Science project pipeline and make it is as clear as possible
- Organized NLP data labelling process with a customer team for Question-Answering task (AWS SageMaker Ground Truth)
- Integrated pretrained Question-Answering model to the chatbot backend as an initial ML solution (HuggingFace)

EPAM
| HEAD OF UNIT, RESOURCE MANAGER
Feb 2022 – Present | Samara, RU | Izmir, TR

- Discussions with my subordinates about career development and technical consultations

EPAM
| SERTIFIED TECHNICAL INTERVIEWER
Jun 2020 – Present | Samara, RU | Izmir, TR

- Participation and conduct of technical interviews in the company for various levels - from trainee to senior, in total more than 150 technical interviews

EPAM
| MIDDLE DATA SCIENTIST
Dec 2019 – Jun 2022 | Samara, RU

- Data Science team code review - both Data Science and Back-End parts
- Closely worked with customer management team to explain Data Science process
- Developed serverless backend for chatbot to collect data (AWS API Gateway, Lambda, SQS, RDS, CloudWatch)
- Developed PoC application for processing changes in documents to notify users (Python Multiprocessing, regular expressions)
- Developed serverless backend to integrate NLP models with customer cloud and implemented integration with Outlook server (AWS Lambda, StepFunctions, S3, API Gateway, SQS, O365)

- AWS: Storage and Data Management
- AWS API Gateway with HTTP, Lambda, DynamoDB, and iOS
- AWS for Developers: Step Functions
- Amazon Web Services Machine Learning Essential Training
- Learning Amazon Web Services Lambda
- PostgreSQL Essential Training
- Microservices: Design Patterns
- Prepare for the Docker Certified Associate (DCA) Certification
- Advanced Microsoft Power BI

- Supervised and developed manually models for emails classification, discussed metrics, both models and data quality with the customer, prepared presentations and documentation in Confluence (SKLean, Pandas, AWS Comprehend)
- Building baseline object detection models based on AWS Rekognition service
- Supervised and developed manually different computer vision models for classification, segmentation and object detection tasks (Tensorflow, Keras, TFOD, PyTorch)
- Developed web interface for customer to discuss data labelling process (AWS EC2, Streamlit)
- Building data labelling pipelines based on crowdsource and customer teams (AWS Mechanical Turk, boto3, JupyterLab)
- Improved seismology data quality for geological research in Oil-Gaz industry using Computer Vision techniques (Tensorflow, Keras, Matplotlib, JupyterLab)
- Financial transactions analysis for fraud prediction - building pipeline for data quality analysis (PowerBI, Pandas, Python Multiprocessing)

CLOUD LINK
| Machine Learning Developer
Sep 2018 – Dec 2019 | Samara, RU

- Dataset collection: parsing images from open sources and Open Images Dataset v4
- Data preparation: creating preprocessing pipelines with Scikit-learn, Open-CV, Pandas, Numpy, in addition I used HDF5 and Tensorflow Records for data packaging
- Training and validation of computer vision models: OCR, object detector (TFOD), image classifier (Tensorflow, Keras, also using transfer learning and pre-trained models as backbones for custom architectures)
- Development of the microservice architecture - Rest API, business logic and ML; Microservices deployment via Docker compose; ML model deployment via Tensorflow Serving and Docker; Connection to video broadcast over the network, running machine learning model predictions, description of the objects interaction logic in frames
- Implementation of the Rest API on Flask
- Implementation of multi-threaded calculations in Python
- DS Task management: decomposition of tasks for other team members, managing of daily meeting with team, retrospective and planning at the end of sprint, backlog grooming

SAMARA STATE AEROSPACE UNIVERSITY
| Research Laboratory Assistant
Feb 2015 – Dec 2017 | Samara, RU

- Research of intelligent control systems of Aviation Engines
- Research stability of Engine's control systems
- Laboratory test bench development for Engine's work simulation

SAMARA STATE AEROSPACE UNIVERSITY
| Engineer in the Control Systems Laboratory
Feb 2015 – Dec 2017 | Samara, RU

- Aviation Engines models development in Matlab Simulink
- Control Systems development and simulation in Matlab tools
- Aviation Engine identification via Neural Networks

PROJECTS

PYRL
2021 – Present
https://github.com/AlKuz/PyRL
Pet-project to learn Reinforcement Learning and make RL more convenient to use.

CHAT-BOT FOR MEDICAL DATA ACCESS
Mar 2022 – Present
Chatbot for simplifying access to the large medical document storage. The chatbot is working on top of existing searching tool. Implemented data collection backend and labelling pipeline.

MEDICAL DATA COLLECTION AND REPORTING
Oct 2021 – Mar 2022
Loading diseases data from side aggregator to collect all updates and help medical staff be aware of last clinical researches. I was responsible for project architecture development, leaded DS team, provided code reviews and implemented core components.

INTELLIGENT FINANCIAL ANALYSIS SYSTEMS
2020 – 2021
My own pet project to analyze stock assets. Using Yahoo Finance API to get information about assets. Connect to the broker via API, get portfolio data and rebalance assets. Developed microservices architecture for the project.

CLASSIFICATION AND PROCESSING OF EMAILS
Mar 2021 – Oct 2021
Classification and processing of email messages to help support team and generating reports for managers. During the project I developed data processing architecture and research pipeline, leaded DS team, provided code reviews and implemented half of the pipeline components.

OBJECT DETECTION ON THE VIDEO OF URBAN INFRASTRUCTURE SURVEY
Apr 2020 – Feb 2021
Developed data labelling pipelines, trained and deployed different Computer Vision models (classification, segmentation and object detection tasks). Implemented simple UI based on Streamlit to discuss labelling process and quality with the customer.

SEISMOLOGICAL OBSERVATION DATA ANALYSIS
Mar 2020 – Mar 2020
Create models to improve the quality of seismology images.

FRAUD DETECTION IN FINANCIAL TRANSACTIONS
Feb 2020 – Feb 2020
Developed data preprocessing, validation and feature generation pipeline.

COMPUTER VISION SYSTEM FOR CAR PARKING
Sep 2018 – Dec 2019
Detecting and tracking objects from IP camera video. I was developing a backend for video processing, writing logic of interactions between objects, and sending events to the main business processes server.

RESEARCH AND DEVELOPMENT OF CONTROL SYSTEMS FOR MICRO GAS TURBINE ENGINES
Sep 2015 – Feb 2017
Thermodynamic modeling of micro gas turbine engines, research and development of control systems for this ones

DIPLOMA PROJECT "DEVELOPMENT OF A MATHEMATICAL MODEL LPRE UNITS AND RESEARCH ENGINE DYNAMIC CHARACTERISTICS"
Sep 2014 – Feb 2015
Modeling of Rocket Engine and its control system using Matlab Simulink.