Alexander Kazeka

Machine Learning Engineer:
Computer Vision, NLP, Data Science

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With 10 years of professional experience in machine learning (ML), natural language processing (NLP recommendation systems), computer vision (CV), and autonomous air vehicles (UAV), I bring expertise across various ML domains. As a competent full-stack software engineer, my passion is productizing state-of-the-art technology to solve important problems and generally building useful things to make life better.

MS in Computer Science, Colorado State University

Thesis: Visual Location Awareness for Mobile Robots Using Feature-Based Vision

Senior Computer Vision Engineer (UAV) | aOrion
SEPTEMBER 2019 - PRESENT

Leading design and development of computer vision systems for UAVs—SLAM, navigation, surveying, custom payload drivers, and companion computer software at aOrion/UVR: top unmanned helicopter design and fabrication bureau. **Technology stack:** Python, C++, ROS, OpenCV, CUDA, pandas, NumPy, TensorFlow, PyTorch, Flask, microservices, NVIDIA Jetson, Ardupilot, Mender, CAN, D-Bus

- R&D state-of-the-art computer vision for obstacle avoidance, navigation, SLAM; camera system calibration; integration with Ardupilot, optimization for and deployment on NVIDIA Jetson platform
- Rapid prototyping (PoC/MVP) of custom software for depth perception, video streaming, stabilization, GPS processing in various environments
- Architecture design and development for over-the-air software updates system

Senior Machine Learning Engineer (NLP) | Scout Exchange
APRIL 2016 - AUGUST 2019, BOSTON (REMOTE)

Developed key capabilities in language processing and machine learning at goscoutgo.com—a talent acquisition platform. **Technology stack:** Python, Flask, SpaCy, pandas, NumPy, scikit-learn, TensorFlow, PyTorch, R, MATLAB, C++, Go, AWS, microservices, Elasticsearch, Redshift, MLOps

- Deployed NLP-based recommendation system for recruiter agencies—increased quality of recommendations by 50%
- Advocated for, implemented, and conducted A/B testing of recommendation features to validate results
- Developed autoencoder-based (VAE) resume summarization for ranking
- Feature and model engineering, model selection, visualization of results
- MLOps: maintenance of ETL pipelines; dataset, experiment and model versioning; CI/CD

R&D Software Engineer (Computer Vision) | litl
JANUARY 2013 - APRIL 2016, BOSTON (REMOTE)

Developed computer vision and machine learning components for Room for More—a photo and video cloud backup service. **Technology stack:** Python, Flask, OpenCV, pandas, NumPy, scikit-learn, Caffe, C++, CUDA, OpenMP, MPI, Go, AWS, microservices, Elasticsearch, RabbitMQ

- Developed deep-learning-based image gallery search by style
- Data labelling app for the above
- Designed and implemented image, audio, and video fingerprinting, de-rotation, and deduplication REST microservices
- Image quality assessment tool; scene and facial recognition R&D

Marie-Curie Graduate Fellow | Freiburg University
AUGUST 2010 - AUGUST 2011, FREIBURG, GERMANY

Research of visual motion processing in the cortex. I implemented state-of-the-art models and algorithms for neuromorphic neural networks' simulation using C++. Data analysis and visualization with Python, pandas, NumPy, scikit-learn.

Skills summary: design & development of machine learning systems; deep learning, computer vision, NLP, recommendation systems, data analysis and visualization; Python, Flask, PyTorch, Keras, pandas, scikit-learn; SQL/NoSQL, ETL, AWS, Git, Docker, MLOps, CI/CD