

Alibek Erkabayev

Senior Computer Vision & Machine Learning Engineer

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SUMMARY

Results-driven Computer Vision and Machine Learning Engineer with proven expertise in leading end-to-end technical projects. Hands-on experience designing, developing, optimizing, and deploying deep learning models for real-time image analysis and object detection. Skilled in integrating ML pipelines across both edge and cloud environments using Python, TensorFlow, PyTorch, OpenCV, and C++. Proven track record of collaborating with cross-functional teams to deliver high-impact AI solutions.

TECHNICAL SKILLS

- **Languages:** Python, C/C++, JavaScript, TypeScript, SQL
- **Frameworks:** FastAPI, Flask, Boost, WebGL, OpenGL, PyTorch, Keras, Tensorflow, OpenCV, Scikit-learn, Pandas, Nump, Matplotlib, Seaborn
- **DevOps/Tools:** Docker, Kubernetes, Git, CI/CD, AWS, GCP, Azure, PostgreSQL, MongoDB

WORK EXPERIENCE

Senior ML & CV Engineer | Consultant @ [ERA Tech](#) (July 2018 – October 2025)

Remote, Türkiye

Tech: Python, OpenCV, Tensorflow, PyTorch, ETL, Langchain, OpenAI, GCP, AWS, Azure

- Designed and optimized AI/ML models for cloud and edge deployment by applying quantization, pruning, and TensorRT/TFLite conversions, reducing latency by up to 60%.
- Built scalable data pipelines using automated ETL workflows in Python with API integration and web scraping, cutting data preparation time from days to hours.
- Delivered AI consulting in WebAR, Computer Vision, and AI applications by leading cross-functional teams, enabling clients to launch innovative AI-driven products.

Team Lead - Computer Vision Department @ [Web-AR.Studio](#) (November 2021 – February 2025)

Remote, USA

Tech: C++, Python, OpenCV, WebGL, OpenGL, WebAssembly.

- Led the Computer Vision team, overseeing project development, technical strategy, and cross-functional collaboration to deliver AI-powered solutions.
- Enhanced AR experiences with SLAM methodologies for resulting accurate positioning and mapping.
- Researched and implemented object recognition using feature detection and matching techniques.
- Developed real-time visual tracking using local feature detectors and descriptors.

Machine Learning Engineer @ [UZAKTA Bilişim ve Tasarım Ltd. Şti.](#) (February 2019 – October 2021)

Istanbul, Türkiye

Tech: Python, OpenCV, Tensorflow, Pandas, NumPy, GAN, CNN

- Implemented Conditional and Markovian GANs for obstacle clearance by training on real-world datasets, improving navigation accuracy in challenging environments.
- Researched the effect of CNN architectures and image resolution through controlled experiments, achieving an optimal balance between model accuracy and inference speed.
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Researching Trainee at ROBOTIC Lab. @ [YTU](#) (June 2017 – September 2017)

Istanbul, Turkey

Tech: C++, Python, ROS, OpenCV, Gazebo, FPGA

- Worked with FPGA platforms to design and test custom digital logic circuits, enhancing hardware processing capabilities.
- Implemented a basic computer model on FPGA using Verilog, demonstrating core CPU architecture and instruction execution.
- Created FPGA tutorials for computer science students with step-by-step lab exercises, improving learning outcomes and engagement.
- Designed and built a robotic model integrating sensors and controllers, enabling autonomous navigation.
- Developed automated 3D mapping algorithms for exploration tasks, generating accurate environment reconstructions.
- Implemented real-time obstacle detection and avoidance using sensor fusion, improving robotic safety and efficiency.

EDUCATION

Konya Technical University

Konya, Turkey

PROJECTS

- Web Augmented Reality System – Real-time GPU-based image pipeline with WebGL shaders, WebAssembly-ported C++ detectors, and modular JavaScript/TypeScript architecture – [Project](#)
- Image Cleaning and Super Resolution – Image-to-image Pix2Pix GAN for obstacle removal, TeCoGAN super-resolution, optimized for Nvidia Jetson AGX Xavier, with WebRTC demo UI – [Github](#)
- Object Detection with YOLO and LSTM – Custom hospital image dataset, YOLOv3 training for tiny object detection, LSTM-based object tracking – (Private Project)
- NSFW Classifier API – Content moderation model trained on 100k+ images, fast API with low latency, Dockerized and I/CD deployed to DigitalOcean – [Project](#)
- AI-based Logo Generation – Prepared real and synthetic logo datasets, conditional StyleGANv2 training, Flask based web demo – [Github](#)
- Android Malware Detection System – Opcode hashing optimization, training with GloVe and Word2Vec, evaluation using Weka – [Github](#)

LANGUAGES

- English - Upper-Intermediate
- Russian - Native
- Turkish - Native
- Uzbek - Native
- Turkmen - Native
- German - Basic

CERTIFICATIONS & PROFESSIONAL TRAININGS

Machine Learning & Data Science:

- Data Scientist Associate - [DataCamp](#) (2025)
- Introduction to Data Science in Python – [DataCamp](#) (2025)
- Supervised Learning with scikit-learn – [DataCamp](#) (2025)
- AWS Machine Learning Foundations – [Udacity](#) (2021)
- Supervised Machine Learning: Regression – [Coursera](#) (2021)

Data Engineering & ETL:

- Data Engineer - [DataCamp](#) (2025)
- ETL and ELT in Python – [DataCamp](#) (2025)
- Exploratory Data Analysis for Machine Learning – [Coursera](#) (2021)

DevOps & MLOps:

- MLOps Concepts – [DataCamp](#) (2025)
- CI/CD for Machine Learning – [DataCamp](#) (2025)
- Introduction to Docker – [DataCamp](#) (2025)
- Introduction to Containers w/ Docker, Kubernetes & OpenShift – [Coursera](#) (2021)