

# Oleksandr [Alex] Bailo

COMPUTER VISION · DEEP LEARNING

✉ alexandr.baylo@gmail.com | 🏠 bailool.github.io | 📱 BAILOOL | 🌐 abailo

## Summary

Programming Languages: Python (proficient) • C/C++ (proficient) • Java (prior experience) • MatLab (prior experience)  
Technical skills: Pytorch • Tensorflow • ONNX • Camera calibration • OpenCV • Open3D • Cl/CD • LaTeX • Git  
Languages: Fluent in English, Ukrainian, Russian; advanced level in Korean; learning Dutch

## Experience

<b>Qualcomm</b>	STAFF ML R&D ENGINEER, XR TEAM	<i>Amsterdam, Netherlands</i>
• 3D reconstruction and scene understanding for Snapdragon Spaces		<i>Jul. 2021 - present</i>
<b>Oosto</b>	DEEP LEARNING RESEARCHER AND SCRUM MASTER	<i>Belfast, UK</i>
• Body detection and model evaluation tools • Body re-identification • Replay face spoofing attack detection		<i>Apr. 2020 - Jun. 2021</i>
<b>Kakao Brain</b>	DEEP LEARNING RESEARCH ENGINEER	<i>Seongnam, S.Korea</i>
• Human pose estimation and action similarity research for fitness tracking		<i>Nov. 2019 - Mar. 2020</i>
<b>Noul Inc.</b>	COMPUTER VISION & DEEP LEARNING RESEARCH ENGINEER	<i>Yongin, S.Korea</i>
• Microscopy diagnosis of malaria. Development from training to edge product integration • Created hematology analyzer with detection, segmentation, and classification capabilities • Research on GANs for medical data augmentation resulting in publication		<i>Aug. 2017 - Oct. 2019</i>
<b>Healthrian</b>	SOFTWARE ENGINEER, INTERN	<i>Daejeon, S.Korea</i>
• Developed an Android application for ECG medical device		<i>Jun. 2015 - Aug. 2015</i>
<b>My Design Lab • KAIST</b>	UNDERGRADUATE RESEARCHER	<i>Daejeon, S.Korea</i>
• Developed a drone to implement wall painting works for skyscrapers		<i>Dec. 2014 - Jun. 2015</i>

## Education

<b>Korea Advanced Institute of Science and Technology (KAIST)</b>	<i>Daejeon, S.Korea</i>
M.S. IN ELECTRICAL ENGINEERING. ROBOTICS AND COMPUTER VISION [LAB.] SUPERVISED BY [IN SO KWEON]	<i>Sep. 2015 - Aug. 2017</i>
• A real-time vehicular vision system to seamlessly see-through cars • Intelligent assistant for people with low vision abilities • Machine learning-based autonomous vehicle vision system	
<b>Korea Advanced Institute of Science and Technology (KAIST)</b>	<i>Daejeon, S.Korea</i>
B.S. IN ELECTRICAL ENGINEERING & BUSINESS AND TECHNOLOGY MANAGEMENT	<i>Sep. 2011 - Aug. 2015</i>
• Manager at KAIST International Basketball Club (KIBC) • Vice President, Public Relations Head at KAIST International Student Association (KISA)	

## Selected Publications

### INTERNATIONAL JOURNALS

- CVIU22** MC-Calib: A generic and robust calibration toolbox for multi-camera systems  
**IJCV22** Real-Time Multi-Car Localization and See-Through System  
**Access21** A Body Part Embedding Model With Datasets for Measuring 2D Human Motion Similarity  
**PRL18** Efficient ANMS for homogeneous spatial keypoint distribution

### INTERNATIONAL CONFERENCES

- ICCV23** DG-Recon: Depth-Guided Neural 3D Scene Reconstruction  
**CVPRW19** Red blood cell image generation for data augmentation using cGAN  
**ICCV17** VPGNet: Vanishing Point Guided Network for lane and road marking detection and recognition  
**WACV17** Robust road marking detection and recognition using density-based grouping and ML techniques