



Devs\_Data

probability of possessing a weapon  
0.92

# AI Computer Vision real-time video processing: Human detection case study

We made an advanced Computer Vision software for a military company to detect human posture on real-time footage.



We offer premium technology services for business

DevsData LLC is a boutique software & recruitment agency with Google-level engineers and a vast network of senior expert contractors.



Human Detection



Works in a low light conditions



Activity Detection



Implemented in security cameras



Deployed on Nvidia Jetson



And so much more

We worked for

VARNER



SKYCATCH

NOVARTIS

PionerLabs

SIGNAL CAPITAL

# Detect human contour and center of mass in real-time

## Project overview

One of our customers needed a software solution that detects humans on a video stream in real-life which will be as lightweight as possible to be run on a low cost, small device equipped with an **Nvidia GPU**.

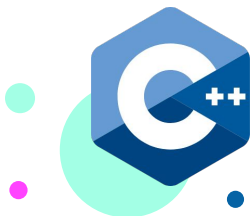


## Performant Nvidia Jetson software

The hardware capabilities of Nvidia Jetson made Deep Learning infeasible for this task. However, we managed to provide a performance-optimized, OpenCV-based algorithm that worked in real-time, with very low latency and with the required precision. To speed up computations, we've used the C++ OpenCV library in our Python code - the official Python version didn't provide access to CUDA algorithms, so we created a dedicated library to provide appropriate bindings.

## Further project development

Currently, we are working on extensions to the existing algorithm to enable more comprehensive predictions like real-time body part segmentation and gesture recognition.



## Using C++ in many ways:

- Drawing contour over human body
- Leveraging bloom filters and advanced mathematical models
- Real-time video processing
- Handling difficult lightning conditions

# Throughout the years, our engineers have gathered hands-on experience as they participated in and led international projects.

The **DevsData team** is a dynamic group united by a passion for mathematics, technology and an expert capability in Machine Learning and Deep Learning.

We are an **award-winning** team of people with extensive, broad experience. Some of us worked at top tech companies before joining DevsData - such as **Google, Microsoft, NVIDIA, Intel or management consulting - PwC, McKinsey, or Goldman Sachs** to name a few.



1. **Challenging projects is what we like the most.**
2. **Rapid prototyping and MVP development, with the scalability in mind.**
3. **Rigorous tech recruitment process for the engineering team.**
4. **Business-oriented technology approach.**



# “ The way we work is very transparent.

We plan everything in advance, together with the clients and all the priorities are visible in our PM tool, accessible at any point in time.

## Transparency in the way we work

Most of our specialists work remotely from our European office, however, we are open to permanent, cross-border relocation of selected engineers. For longer projects, we usually start full-time engagement with 2 weeks of onboarding, locally at the client's office.

## Communication & business understanding first

We always make sure to be on the same page with our clients as we strongly believe that communication, and aligning business priorities of the technological solution is the key to fruitful cooperation.



Dedicated Slack Channel



Project Planning and Grooming Every Week



Regular Video Calls (twice a week)



Shared access to a project management tool and code repository



Engineers and PMs replying instantly to messages and emails



Time overlap with the US eastern time zone



Frequent in-person meetings

# Clients delighted with our performance

## Experienced in large-scale projects

“

Tom runs a unique IT consulting firm, DevsData. I have the pleasure of working with him as business partners on a big-scale digital transformation project for Varner - a European fashion Group with 11 thousand employees worldwide - **they have assembled the core Machine Learning and Software team for the operation.** I can personally guarantee their dedication, ability to understand the business needs and track down those exceptional people (we're very picky) wherever they are located. ”



**Nikolai Fasting,**  
CEO of Syncano, Inc.;  
Executive VP of Varner  
digital transformation

**syncano**

Mr. Nikolai is a serial entrepreneur with over 20 years of business experience. He has raised \$7M for his recent NY-based IT venture - Syncano - that is on a mission to popularize server-less technologies at scale. Recently Mr. Fasting has been involved as an executive VP in a challenging digital transformation project for Varner Group managing the budget of \$9M.

## Flexible and dynamic

“

The pace was very fast, with tight project milestones and deadlines as well as quick iterations. The machine learning approach was well thought out and the advantages, as well as drawbacks, were well-explained. The project was a **huge success.**”



**Angela Sy,**  
Head of Strategy at  
SkyCatch, Inc.

**SKYCATCH**

Ms. Sy is a former Head of Artificial Intelligence at Skycatch, a venture-backed (\$46m) commercial drone startup based in San Francisco, California. Skycatch's goal is to build flying supercomputers (a.k.a. drones) to turn the physical world into an indexed database of quantitative information.

# DevsData LLC - a premium technology partner

- ✓ Worked with **premium & extremely demanding clients** before (hedge funds, fast-moving VC-backed startups).
- ✓ **100% client satisfaction** rate, 5.0/5.0 score on clutch.co.
- ✓ **Strong business & marketing** focus in addition to high engineering skills.
- ✓ **Extensive experience** in very recent technology tools, frameworks and languages for innovative software development.
- ✓ Ultra **transparent** way of work.

TRUSTED BY

**VARNER**

**Cubus**

 **SKYCATCH**

 **NOVARTIS**

REVIEWED ON

**Clutch**



5/5 | 31 REVIEWS



STRONG WORK EXPERIENCE FOR THE US STARTUP ECOSYSTEM

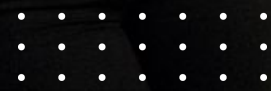
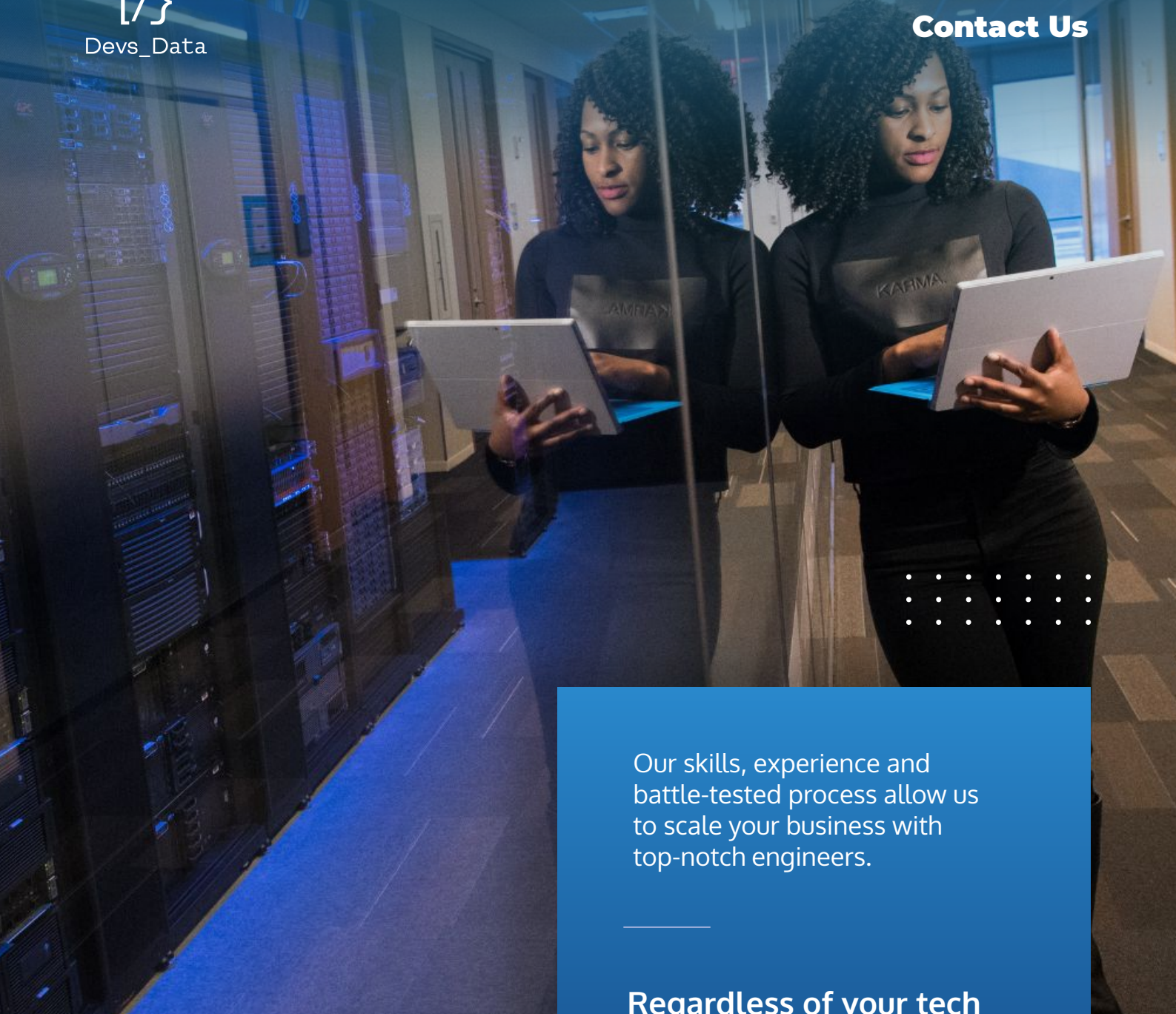
**techstars\_**

**idealab**

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You can find us here:  
devsdata.com



Our skills, experience and battle-tested process allow us to scale your business with top-notch engineers.

Regardless of your tech stack and location.

# Let's talk!

MEDIA MENTIONS:



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