Alex Zhukov

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Profile

I am an engineer who enjoys tackling hard or seemingly impossible problems, knows how to translate between engineer, scientist and business-speak. I obsess about efficiency both organizational and technical, lead teams, code in any language fit for the job, build server infrastructure, optimize CPU or GPU code, train and productize a machine learning model.

I am an author of multiple patents in video field.

Object recognition and database population for video indexing
System and method of object recognition and database population for video indexing
Frequency domain interest point descriptor
Correlating sensor inputs with content stream intervals and selectively requesting and transmitting content streams
Logging events in media files
Logging events in media files including frame matching

My passions are cars, computer vision and skydiving.

Experience

SR SOFTWARE ENGINEER II; UBER ADVANCED TECHNOLOGY GROUP, SELF DRIVING VEHICLES PLATFORM – 2020-PRESENT

Responsible for live video delivery from autonomous vehicles to misc off board services.

- Full rewrite of onboard WebRTC stack.
- Frequent contributor to https://github.com/awslabs/amazon-kinesis-video-streams-webrtc-sdk-c

CTO; VIDEOGORILLAS – 2009-2019

Responsible for all aspects of development, product releases, and technical communications with customers; actively involved in products design.

- Built and led a team of 15 engineers.
- Designed and delivered in-browser video editing tools for Sony Pictures. https://sonymcs.com/
- Engineered on the fly video transcoding system and frame precise HTML5 video player for ABC and Walt Disney. https://videogorillas.com/player

- Delivered best in class fully automatic frame matching technology for CBS.
- Architected, engineered and patented fully automatic movie restore technology used to restore a full feature movie for Netflix. https://www.provideocoalition.com/videogorillas-bigfoot-super-resolution-converts-films-from-native-480p-to-4k/
- Created LIVE4 GoPro - live streaming for GoPro product https://live4.io/
- Created ultra low latency live streaming platform for DJI drones, with custom live streaming media server https://youtu.be/xrCUG1xw5Ks
- Co-Author of https://github.com/jcodec/jcodec and https://github.com/zhuker/lamejs

LEAD ENGINEER; VIEWDLE – 2006-2010

Face recognition in video company. Acquired by Google.

Responsible for all aspects of development, product releases, and technical communications with customers; was actively involved in products design.

- Helped raise VC funding
- Built and led a team of 10 engineers .
- Designed and delivered fusion engine for enriching video indexing information with textual data obtained from custom speech-to-text engine.
- Delivered facial recognition service for indexing video files in the cloud for Reuters.
- Delivered best of the class facial recognition engine for video files.
- Ported the video recognition engine to ARM neon.
- Delivered experimental facial recognition engine using CUDA for NVIDIA's Tesla (joint project with NVIDIA).
- Collected requirements, led development and delivered VideoFriends application for Facebook.

Education

National University of Kyiv-Mohyla Academy — Computer Science BSc, 2004

Skills

Software design, Java, C, JavaScript, C++, Python, Kotlin

References

Stan Vitvitsky - hardware video codec engineer at Google

Arsen Kostenko - video engineer at Netflix

Andrew Rabinovich - Director, Deep Learning at MagicLeap

John Vickery - COO Zeroth industries

Oles Petriv - CTO, Reface AI