

# DANIEL KOCH

## SOFTWARE DEVELOPER

### SUMMARY

Experienced software developer focused on real-time video processing and streaming applications, including telehealth and conferencing systems. Skilled in C++, Python, GStreamer, NDI, mediasoup, WebRTC, and OpenCV, and proficient in modern web technologies such as TypeScript, Node.js, and React.



### EXPERIENCE

#### VIDEO DEVELOPER

*Nearsure - Caresyntax | 2020 - present*

- Developed a remote surgical visualization platform for cloud-based viewers using WebRTC SFU (mediasoup), React, and Node.js.
- Designed and implemented GPU-accelerated NDI camera streaming services in C++, GStreamer, NDI SDK, and Python, utilizing NDI HX with H.264, VP8, and Intel VA-API codecs.
- Built surgical recording services in C++, GStreamer, NDI SDK, V4L2, and Python, leveraging NDI HX (HEVC) and hardware encoders such as Magewell AIO for high-quality, low-latency video capture.

#### COMPUTER VISION DEVELOPER

*3RCorp | 2008 - present*

- Developed *PeopleFlow*, a pedestrian tracker for monitoring and reporting customer traffic in shops and malls;
- Developed *Penalty D-Tech*, a computer vision system for tracking the ball to aid referees in volleyball games;
- Developed *Itaú Vault*, a virtual sluice gate solution that uses Kinect and RGB cameras, safeguarding bank vault rooms.

### LANGUAGES

C++, ANSI C, Python, and TypeScript

### CORE TECH

GStreamer, NDI SDK, mediasoup, WebRTC, cmake, OpenCV, Redis, Docker, NodeJS, and React

### CONTACT DETAILS

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