Richard Lee

Passionate and skilled Embedded Linux Developer with High Video Streaming Tech offering 8 years of relevant experience and a proven track record of success in achieving extraordinary result. Experienced with all stages of the development cycle of any embedded video related products.

Over 8 years of IT experience in Analysis, design, and Development

of various embedded software development.

Capable of excelling as part of a team or individually in a fast-paced

environment. Deeply knowledgeable in video codec, media format, streaming protocol, real time system, various

protocol and standard, Android Open Source Project, and IoT.

# Experience

**Video Engineer on Embedded Android Platform,** 12/2019 – 05/2022

**Jumio,** USA

* Developed MPEG-DASH player using dash.js
* Designed Driver, HAL, Android System Service for use in DVB-T2 player development.
* Developed RTP streaming server with low latency on Embedded Linux of TI DM8169 platform
* Analyzed & Debugged PCR accuracy in MPEG-TS stream
* Developed demodulator and tuner driver to receive DVB-T2
* Developed transcoding module which converts from any codec to H.264 codec using Hardware Accelerator

**Embedded Firmware Developer,** 08/2017 – 09/2018

**Airbyte,** USA

* Developed real time AD convert module in STM32F407
* Tested and deployed scalable and highly available OLED interface products.
* Developed motor control system using Python on raspberry-pi board
* Documented software development methodologies in technical manuals to be used by IT personnel in future projects.
* Developed DVB-T2 receive module in DVB-T2 dongle for android.

**Embedded Software Developer,** 04/2014 – 07/2016

**BTHRUST,** Singapore

* Participated in IOT (Internet of Things) development, specializing in Smart home security systems.
* Performed high-level coding in various programming languages.
* Developed WebSocket Module in Linux OS of DM8169 processor for Camera Encoder
* Designed Redundancy System for Live Streaming Encoder.
* Developed PCIe driver in Linux system for Stream Multiplexer

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# Skill Highlights

* C/C++, Java, Rust, Go, Python, Shell script
* H.264, H.265, VP8, VP9
* MP4, 3GPP, MKV, AVI
* HLS, MPEG-DASH, RTSP, RTP
* TCP/UDP, HTTP, FTP, SNMP
* PCIe/Ethernet/ModBus/CAN/USB/SPI/I2C/I2S/RS232/UART
* Linux Kernel/Driver/RootFS
* Intel/ARM/MIPS/DSP  
  Architecture
* React & Redux, Node.js, REST API
* Typescrypt/Javascript/React
* Electronic&Analog Circuit
* DevOps, CI/CD

# Languages

English – C1

# Education

[**Bachelor of Computer Science**](https://www.bachelorstudies.com/Bachelor-in-Mathematics-and-Computer-Science/Russia/BAUMAN-Moscow-State-Technical-University/)

Nanyang Technological University of Singapore

(2009 – 2013)