



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.

# Richard Lee

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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
- Typescript/Javascript/React
- Electronic&Analog Circuit
- DevOps, CI/CD

## Languages

English – C1

## Education

### Bachelor of Computer Science

Nanyang Technological University of Singapore  
(2009 – 2013)

## 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