

# Jai Luthra

email: [me@jailuthra.in](mailto:me@jailuthra.in) · github: [jailuthra](https://github.com/jailuthra) · blog: [jailuthra.in](https://jailuthra.in)

## WORK EXPERIENCE

DECEMBER 2021 (Current)	<b>Texas Instruments, Bengaluru</b> <i>Embedded Software Engineer</i> <ul style="list-style-type: none"><li>Writing software for TI's Sitara line of ARM-based SoCs, used in industrial and automotive applications.</li></ul> Areas: Linux Kernel, QNX RTOS
APRIL 2020 - DECEMBER 2021	<b>Livepeer Inc., New York</b> <i>Senior Software Engineer</i> <ul style="list-style-type: none"><li>Maintain the low-level side of the live video transcoding pipeline, running on a decentralized network of Nvidia GPUs.</li></ul> Areas: FFmpeg, C/Go, GPU Video Acceleration
AUGUST 2019 - APRIL 2020	<b>Amazon Development Center, Bengaluru</b> <i>Software Development Engineer</i> <ul style="list-style-type: none"><li>Made warehouse mgmt. tools securely accessible over public network.</li></ul> Areas: AWS Networking Services (APIG, ALB), Orchestration (SWF, Step Functions)
MAY - AUGUST 2019	<b>VideoLAN - Google Summer of Code</b> <i>Contributor (Project Page)</i> <ul style="list-style-type: none"><li>Added support for NVDec, NVIDIA's hardware acceleration video decoding API. (<a href="#">git</a>)</li></ul> Mentors: Steve Lhomme, Thomas Guillem
MAY - JULY 2018	<b>Amazon Development Center, Bengaluru</b> <i>Software Development Engineer - Intern</i> <ul style="list-style-type: none"><li>Worked with the <b>Automated Advertising</b> team.</li><li>Created a Spring web app for AWS Simple Workflow Service (SWF) monitoring API.</li></ul>
MAY - AUGUST 2016	<b>FFmpeg - Google Summer of Code</b> <i>Maintainer (Project Page)</i> <ul style="list-style-type: none"><li>Wrote an encoder for Dolby TrueHD, a lossless audio compression codec.</li><li>Updated and merged the MLP (Meridian Lossless Packing) encoder, originally written by Ramiro Polla in 2009.</li></ul> Mentor: Rostislav Pehlivanov (atomnuker)

## EDUCATION

DECEMBER 2019	<b>IIIT-Delhi</b> Bachelor of Technology - <b>Computer Science and Engineering</b>
APRIL 2015	<b>Bal Bharati Public School, Pitampura, New Delhi</b> All-India Senior Secondary Certificate Examination (CBSE), Class XII

## SKILLS

LANGUAGES:	C, Python, Go, Java, C++, Rust
SOFTWARE DEV.:	CUDA, OpenGL, AWS
HARDWARE:	Embedded C, Verilog
ASSEMBLY:	Arduino/AVR, x86 asm, ARM asm

## PROJECTS

2019	<b>foveated raytracer</b>	Foveated ray tracer in C++ for eye-tracking VR headsets.
2017	<b>ans</b>	Hacking around Asymmetric Numeral Systems (ANS) entropy coding in C
2017	<b>kaldi-asr</b>	A wrapper around Kaldi, for easy speech recognition and alignment.
2016	<b>armsimc &amp; armcpu</b>	An ARM simulator in C, and a baby ARM CPU in Verilog.
2016	<b>Mapbots</b>	Mapping rooms using a ring of ultrasonic sensors mounted on an autonomous bot
2016	<b>Kompress</b>	Text compression tool written in C, based on Huffman Coding.

## ACADEMIC INTERESTS

Multimedia Codecs	Computer Graphics	Information Theory	Digital Signal Processing	Quantum Computing
Linear Algebra	Operating Systems	Algorithm Design	Computer Architecture	Virtual Reality