Jai Luthra

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WORK EXPERIENCE

OCTOBER 2024 *(Current)*	**Ideas on Board, Helsinki** *Linux Kernel Engineer* • Writing linux kernel device drivers for camera susbystem. Areas: Linux Kernel, Camera Sensors, ISPs

DECEMBER 2021 - SEPTEMBER 2024	**Texas Instruments, Bengaluru**
	 Embedded Software Engineer
	 • Writing software for TI's Sitara line of ARM-based SoCs,
	   used in industrial and automotive applications.
	   Areas: Linux Kernel, QNX RTOS

APRIL 2020 - DECEMBER 2021	**Livepeer Inc., New York**
	 Senior Software Engineer
	 • Maintain the low-level side of the live video transcoding pipeline,
	   running on a decentralized network of Nvidia GPUs.
	   Areas: FFmpeg, C/Go, GPU Video Acceleration

AUGUST 2019 - APRIL 2020	**Amazon Development Center, Bengaluru** *Software Development Engineer* • Made warehouse mgmt. tools securely accessible over public network. Areas: AWS Networking Services (APIG, ALB), Orchestration (SWF, Step Functions)
MAY - AUGUST 2019	**VideoLAN - Google Summer of Code** *Contributor (Project Page)* • Added support for NVDec, NVIDIA's hardware acceleration video decoding API. (git) Mentors: Steve Lhomme, Thomas Guillem
MAY - JULY 2018	**Amazon Development Center, Bengaluru** *Software Development Engineer - Intern* • Worked with the **Automated Advertising** team. • Created a Spring web app for AWS Simple Workflow Service (SWF) monitoring API.

MAY - AUGUST 2016	**FFmpeg - Google Summer of Code**
	 Maintainer (Project Page)
	 • Wrote an encoder for Dolby TrueHD, a lossless audio compression codec.
	 • Updated and merged the MLP (Meridian Lossless Packing) encoder,
	   originally written by Ramiro Polla in 2009.
	   Mentor: Rostislav Pehlivanov (atomnuker)

EDUCATION

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

SKILLS

LANGUAGES:	C, Python, Go, Rust, Java, C++, x86 asm, Verilog
FRAMEWORKS:	Video4Linux2, CUDA, OpenGL, ALSA

PROJECTS

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