

# Jai Luthra

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

## WORK EXPERIENCE

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|--------------------------|---|
| APRIL 2020<br>(Current)  | <b>Livepeer Inc.</b><br><i>Video Engineer</i> <ul style="list-style-type: none"><li>Improving the low-level video transcoding infrastructure.</li></ul> Areas: FFmpeg, C/Go   |
| AUGUST 2019 - APRIL 2020 | <b>Amazon Development Center, Bengaluru</b><br><i>Software Development Engineer</i> <ul style="list-style-type: none"><li>Make 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><br><i>Contributor</i> ( <a href="#">Project Page</a> ) <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><br><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><br><i>Maintainer</i> ( <a href="#">Project Page</a> ) <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

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

## SKILLS

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

## PROJECTS

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|      |                             |   |
|------|-----------------------------|---|
| 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

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