

AVISH AVIRAJ JHA

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EDUCATION

Carnegie Mellon University (CMU) - School of Computer Science

Master of Software Engineering, Scalable Systems, QPA: 4.17/4.00 [🔗](#)

Dec 2025

Pittsburgh, PA

- Teaching Assistant: 17-614 Formal Methods

Vellore Institute of Technology (VIT)

Bachelor of Technology in Computer Science and Engineering, GPA: 3.82/4.00 [🔗](#)

Aug 2023

Vellore, India

INDUSTRY EXPERIENCE

Snap Inc. (Snapchat)

Aug 2025 – Dec 2025

Software Engineering Intern (Practicum / Capstone) [🔗](#)

Pittsburgh, PA

- Tech lead of a CMU team building an **XR remote desktop PoC** for Snap Spectacles, defined **C4 architecture** and built the system from scratch in **C++/OpenXR/VNC**, delivering **52 FPS, 138ms latency, 21.8% CPU usage** on constrained AR hardware and helped inform future XR product direction.
- Cut streaming bandwidth for **4K by 97% (27 MB/s to 800 KB/s)** by re-engineering the **VNC pipeline** with **tear and jitter free double buffering with adaptive encoding**, making high-resolution desktop mirroring viable in bandwidth-constrained environments.
- Built a **controller-free interaction layer** with **dual-pinch hand-tracking for 6DoF display manipulation** and cursor control, backed by a **multi-threaded input pipeline** supporting physical keyboards (Linux evdev to X11) and a rendered virtual keyboard.

Siemens Healthineers - Ultrasound Division

Jun 2025 – Aug 2025

Software Development Engineer Intern [🔗](#)

Issaquah, WA

- Drove a division-wide migration from 4 fragmented log systems to **OpenTelemetry**: built a **C# AST analyzer** to scan **120+ C#/C++ modules**, defined **XML schemas** for auto-generating functions, & orchestrated **Claude agents** to convert **13k+ loggers** in **~10 weeks**.
- Deployed a **centralized telemetry stack** (OTel Collector, Prometheus, Grafana, Loki) with **backward-compatible exporters** for legacy workflows, while enabling **cross-module debugging** across previously siloed systems.
- Unblocked a **3.5-year stalled .NET modernization**, evaluated **8+ test frameworks**, drove chief architect's adoption of MSTest V3, & built **PowerShell automation** that migrated **28k+ tests** to .NET 8 while auto-correcting violations & handling nested ordered tests.
- Recovered a **20-year-old security module** with lost source code via **Ghidra** reverse engineering and HTML/JS workarounds, bypassing a hardcoded certificate expiration to prevent a service outage across legacy **1,000+ deployed medical devices**.

Addverb Technologies

Jan 2023 – Jul 2024

Software Engineer - Simulations, Optimization & Analytics [🔗](#)

Delhi NCR, India

- Owned design and implementation of a **Spring Boot middleware** replacing legacy OPC integrations, interfacing directly with **proprietary conveyor hardware** to deliver **real-time data flow** to WES (business layer) and monitoring microservices.
- Ran **230+ Goods-to-Person warehouse simulations** modeling order orchestration and SKU clustering, then optimized **pick-face efficiency logic** for a multi-million-dollar US client, cutting daily fulfillment runtime **61% (32h to 12.5h)**.

Athabasca University, Canada

May 2022 – Aug 2022

MITACS Graduate Research Intern [🔗](#)

Edmonton, Canada

- Secured competitive **funding** and deployed a student engagement platform across **3 live university courses**, combining a real-time progress dashboard with **3 deep learning models** via **AWS MLOps** to help professors detect **dropout risk** and intervene early.

Ernst & Young | Technology Consulting Intern [🔗](#)

Jan 2022 – Apr 2022

Tata Steel | Intern / Vocational Trainee [🔗](#)

Jun 2021 – Aug 2021

RESEARCH PUBLICATIONS

NOTE: All publications are *double blind peer-reviewed*. Full list of 5 papers on [Google Scholar](#) [🔗](#).

IEEE: 7th CSI-TSS, 2023 | Python, MNE, Multiple EEG Extractors

Mar 2023 - Sep 2023

Harnessing Creative Methods for EEG Extraction & Modeling in Neurological Disorder Diagnoses [🔗](#)

Vellore, India

IEEE: 7th CSI-TSS, 2023 | Python, OpenCV

Jan 2023 - Sep 2023

Enhancing Visibility: Multiresolution Dark Channel Prior for Dehazing and Fog Removal in Images [🔗](#)

Vellore, India

PROJECTS

NOTE: Selected projects, full list of 10+ projects on [avishj.dev](#) [🔗](#).

ExplainRFC | TypeScript, Astro, React, Three.js, GSAP [🔗](#)

Nov 2025 – Present

- Turns dense IETF standards (TCP, BGP) into guided, explorable 3D exhibits with packet inspectors, state-machine viewers, and step-by-step narration making internet protocols visually understandable without reading the spec.

ForexRadar | JavaScript, Bun [🔗](#)

Jan 2025 – Present

- Exposes hidden credit card exchange rate markups by comparing Visa, Mastercard, and ECB rates across 151 currencies with upto 25+ years of data refreshed twice daily, helping travelers pick the cheapest card network before every transaction.

SKILLS, AWARDS & ROLES

Languages: Java, Python, C++, Rust, Go, C#, TypeScript, JavaScript, C, SQL, HTML/CSS.

Cloud & Infrastructure: AWS, GCP, Azure, Docker, Kubernetes, Kafka, RabbitMQ, Redis, MongoDB, Linux, Git.

Frameworks & Tools: Spring Boot, OpenTelemetry, Grafana, Prometheus, Loki, React, Astro, TensorFlow, OpenXR, Playwright, Playwright.

Awards & Roles: Special Achiever's Award at VIT, Treasurer at MSE Leadership Initiative at CMU.