

# DIVYAM AHUJA

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## EXPERIENCE

### AMD

Bangalore

#### Software System Designer

August 2022 - Present

- I am part of Java Performance Team, working on optimizing and tuning Java for AMD processors.
- I have wrote scripts for optimizing java performance by as much as 2% for AMD processors.
- I have worked on building tools for automation and visualization of openjdk performance.

### Chromium

#### Google Summer of Code Contributor

May 2022 - September 2022

- I experimented with design patterns and worked on libraries for **AudioWorklet** and **WebAssembly interaction**.
- ScriptProcessorNode is widely being used for Audio Processing, but it runs on JavaScript main thread, which is unsecure and can have bad user experience as it runs on main thread.
- The design pattern I worked on use **Web Workers, Atomics, and SharedArrayBuffer**, to run WebAssembly and Audio Processing code on a separate Web Worker thread, which provides better isolation, security and overall better user experience
- [github.com/DivyamAhuja/gsoc-chromium-freequeue](https://github.com/DivyamAhuja/gsoc-chromium-freequeue)

## EDUCATION

### Deenbandhu Chhotu Ram University of Science and Technology

Sonipat, Haryana, India

**B.Tech. Computer Science & Engineering (CGPA: 7.79)**

August 2018 – August 2022

## SKILLS

**Languages:** C, C++, Python, JavaScript, TypeScript, Rust, Go (Golang)

**Frameworks:** React, Next.js, Node.js, Deno, Svelte

**Tools/Platforms:** UNIX/Linux, Shell, Git, Docker, Emscripten, WebAssembly

**Databases:** MySQL, MongoDB, Fauna

## PROJECTS

### fastbin: A code sharing web app | *React.js, Next.js, Serverless functions (Vercel), Serverless Database (Faunadb), TypeScript*

- A fullstack code sharing web application, deployed on vercel with **100% serverless backend**.
- Frontend is implemented in Next.js and Backend using serverless functions (Vercel) and database (Faunadb).
- Share code easily via links, and code gets deleted from database after 5 days.
- [github.com/DivyamAhuja/fastbin](https://github.com/DivyamAhuja/fastbin), [fastbin.divyam.dev](https://fastbin.divyam.dev)

### YMeet | *React.js, Socket.io, Node.js, WebRTC, Express*

- A full-stack video call app with node.js and express serving a REST API and reactjs used for frontend.
- WebSockets and socket.io for P2P connection and WebRTC credentials sharing.
- Implements peer to peer connection using WebRTC to transmit video for upto 4 connections.
- [github.com/DivyamAhuja/YMeet](https://github.com/DivyamAhuja/YMeet), [ymeet.divyam.dev](https://ymeet.divyam.dev)

### 3D Rendering Engine | *C++, CMake, OpenGL, GLTF, GLFW*

- An OpenGL based 3D renderer written in C++.
- Implements basic mesh loading from GLTF file and Phong model for basic illumination.
- [github.com/DivyamAhuja/nyan-renderer](https://github.com/DivyamAhuja/nyan-renderer)

## COURSES AND CERTIFICATIONS

### MITx 6.86x: Machine Learning with Python-From Linear Models to Deep Learning

Virtual, edX

*MITx, edX*

December 2020

### CS50AI: CS50's Introduction to Artificial Intelligence with Python

Virtual, edX

*Harvard, edX*

July 2020