

# Abhikalp Unakal

I'm a software engineer and musician constantly in pursuit of creating beautifully designed digital experiences.

## EXPERIENCE

### Meta Platforms, Inc, Redmond

Software Engineer - Audio Research @ Reality Labs AUG 2021 - PRESENT  
Currently working on Advanced Development involving custom hardware, that furthers AR/VR tech as a software engineer on Meta Reality Labs

### Roland Corporation U.S, Seattle

Intern Software Engineer - Roland Cloud SEP 2020 - APR 2021  
Shipped a device editor as part of the Editor Team to create a Virtual Tone editor that lets JUPITER-X users manage their sound profiles. I was responsible for the UX design and Metrics Data Collection for this project. [Roland - JUPITER-X Editor | Editor/Librarian](#)

### Danske Bank, Bengaluru - Copenhagen

Software Engineer - Advanced Analytics Platform SEP 2016 - JUL 2019  
Developed customized pipelines for efficient data and machine learning model deployment, reducing deployment time from 3 months to 1 week. Architected a model deployment framework on a Hadoop setup, managing a cluster with 50 Hadoop boxes and 250 edge nodes.

## EDUCATION

### DigiPen Institute Of Technology, Redmond(WA), USA

M.S Computer Science and Engineering SEP 2019 - APR 2021

### PES Institute Of Technology, Bengaluru,India

B.E Computer Science and Engineering AUG 2012 - JUL 2016

## PROJECTS

### Atom— Game Engine 3.0 Built from Scratch using c++

I was the Tech lead + producer on this project and collaborated with 3 other people. This game engine had advanced Event systems, ECS engine and 3D audio.

<https://www.youtube.com/watch?v=qDjw00-MoQI>

### MoorerReverb Research Paper Implementation— Real Time Reverb Engine in JUCE

Written from scratch using c++ and JUCE this is a VST plugin that can work in any DAW. This is a research paper implementation of James A Moorer's Research Paper

<https://github.com/auxeon/MoorerReverb>

### Katana Utility AI — Custom Utility AI for football 2D

Soccer simulation and AI written in C# using unity that is based on utility based behavior AI - one of the most fun projects I worked on. <https://www.youtube.com/watch?v=rBCwW9KNq9A>

### Automated Machine Learning Model Deployment Pipelines — Jenkins + python

Custom Framework built to enhance the Model Deployment Scheduling and executor node orchestration on hadoop. Tech stack used - Jenkins, Chef, Python, Spark, Redis, Artifactory, linux, Netapp Shared drives.

### Orange Audio — Music Visualizer + Note Detection

Written from scratch using C++, OpenGL and ALSA for Audio Driver API's.

<https://github.com/auxeon/OrangeAudio>

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## SKILLS

### Programming

C++  
C  
Python  
Dart  
C#

### Technical

JUCE  
Audio DSP  
Linux  
Automation CI/CD  
Game Engine Dev  
Git  
GDB  
Mercurial  
Flutter

### Software

Logic Pro  
Unity

### Audio

Composing Tracks  
Audio Production  
Vocals  
Pianist

### Design

Web Design  
Game Design  
InVision

## ACHIEVEMENTS

### Global Graduate Program

Runner Up Case Study Competition

### Exchange Student

San Jose State University  
Completed with 89%

### TEDx Organizer

TED\*PESITBSC chapter

### NID Design Festival

Runner Up All India Student Design Competition