Abhikalp Unakal

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

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EXPERIENCE

Facebook Reality Labs, Redmond

Software Engineer - Audio Research   AUG 2021 - PRESENT
Currently working on Audio research prototypes for the Audio Presence Pod at FRL

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   MAR 2018 - JUL 2019

Created Customized Pipelines for Data and Machine Learning Model Deployment, that increased throughput and allowed the platform team to deploy models in 1 week using my automated pipelines instead of 3 months in the earlier deliveries.

Global Graduate - Advanced Analytics Platform   SEP 2017 - MAR 2018

Was Responsible for architecting the model deployment framework on the Hadoop setup. Automated heartbeat framework to check the health of client edge nodes in python. The hadoop cluster had about 50 hadoop boxes and about 250 edge nodes

Global Graduate   SEP 2016 - SEP 2017

Worked on Information management on Mainframes at the Data Foundation. Also worked with The Treasury Department of Danske Bank to help optimize and troubleshoot their reporting flows for the central banks.

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-M0QI

MoorerReverb Research Paper Implementation— Real Time *Reverb Engine in JUCE*
Written from scratch using c++ and JUCE this is a VSTplugin 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

SKILLS

Programming
C++
C
Python
Dart
C#

Technical
JUCE
Audio DSP
Linux
Automation CI/CD
Game Engine Dev
Git
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
TEDxPESITBSC chapter

NID Design Festival
Runner Up All India Student Design Competition