

Kartik Prakash

[Linkedin](#) • (786)-301-1889 • www.karobmusictech.com • kxp772@miami.edu

EDUCATION

UNIVERSITY OF MIAMI - FROST SCHOOL OF MUSIC, Coral Gables, FL

AUGUST 2021-JUNE 2023 (EXPECTED)

M.S. Music Engineering Technology

Graduate teaching assistant: MIDI applications using Microcontrollers, Audio Technology for Musicians

Relevant Coursework: Audio Signal Processing I, Statistical Signal Processing, Audio Effects and Synthesizers in C++, Machine Learning

NMIMS UNIVERSITY - MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING,
Mumbai, India

JULY 2014-MAY 2018

B.Tech Computer Engineering

Relevant Coursework: Software Engineering, Digital Signal Processing, Analog & Digital Communications, Artificial Intelligence, Microprocessor & Microcontroller, Computer Programming- II

EXPERIENCE

ANALOG DEVICES, Wilmington, MA

MAY-AUGUST 2022

Applications Engineering Intern, Automotive Audio

- Conducted experiments to achieve Personal Sound Zones in cars by implementing a multi-channel, playback system using the Sharc Audio Module and achieved an average 20dB contrast separation for all frequencies between two zones.
- Measured and calculated room impulse responses using MATLAB.
- Initialised the A2B bus and sub-node peripherals using SigmaDSP.

JIO PLATFORMS LIMITED (PREVIOUSLY RELIANCE INDUSTRIES LIMITED), Navi Mumbai, India

JULY 2018-JULY 2021

Front End Developer, Enterprise Mobility Team

- Wrote modular code while following Agile methodologies to develop multiple web applications using the MEAN stack.
- Integrated technology in business processes, specifically R-Contracts(Contract Management System) that reduced cumbersome paperwork, and processing times by 50%.
- Followed DevOps practices by implementing CI/CD pipelines in Azure.

LARSEN & TOUBRO, Mumbai, India.

JUNE-JULY 2017

Application Development Intern

- Used the .NET framework with C# and SQL to develop a mobile application leveraging QR code technology for inventory management that reduced manual labour by 75%.

WEAPONS AND ELECTRONICS SYSTEMS ENGINEERING ESTABLISHMENT (WESEE),
MINISTRY OF DEFENCE, Delhi

MAY-JUNE 2016

Research Intern

- Implemented the Haversine formula in C++ (Qt framework) as a desktop GUI software to determine the geographic distance and bearing between two points at sea.

ENGINEERING PROJECTS

AUDIO PLUGIN DEVELOPMENT

AUGUST 2021-PRESENT

- Developed a wide variety of audio effect plugins like Delays, Eq's, Enhancers in C++ using the JUCE and RACKAfx framework.
- Implemented a FFT spectrum analyser to view the effect of a biquad filter, reverb and distortion using Apple's vDsp framework, for iOS devices.

ORBUS (MIDI CONTROLLER)

FEBRUARY-MAY 2022

- Utilised air pressure sensors (LPS22) and ultrasonic sensors(HC-SR04) with the Arduino to build an interactive, spherical live performance MIDI controller

MUSIC GENRE CLASSIFICATION USING MACHINE LEARNING

APRIL-MAY 2022

- Formulated a 2D CNN model and trained it with the GTZAN database to achieve a 85% accuracy in music genre classification.

NONLINEAR MODELLING OF ANALOG HARDWARE

OCTOBER 2021

- Extracted higher harmonic impulse responses of DUT using Exponential Sine Sweep method.
- Implemented Antiderivative Antialiasing on a simplified nonlinear Volterra model in MATLAB.

HUMIT

AUGUST 2019-MARCH 2020

- Built UI components of a mobile application that enables music discovery through social interactions using React Native.

TECHNOLOGIES AND PROGRAMMING LANGUAGES: C, Objective-C, C++, C#, .NET, TypeScript, JavaScript, Angular, React Native, SQL, Python, Flask, Node Js, Qt, MATLAB, Flutter, Azure, Kubernetes, LaTeX, SigmaDSP, Git

