

# Comparing Android Runtime with native: Fast Fourier Transform on Android

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# Outline

## 1 Introduction

- Purpose of Work
- Research Question

## 2 Background

- Android Platform
- Java Native Interface (JNI)
- Discrete Fourier Transform (DFT)
- Fast Fourier Transform (FFT)
- Related Work

## 3 Method

- Experiments
- Measurements
- Implementation

## 4 Results and Discussion

- JNI
- Libraries
- NEON
- float vs double
- Garbage Collection

## 5 Conclusions

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- Why is this important?
- Where is it used?
- Who can benefit from it?

# Research Question

*Is there a significant performance difference between implementations of a Fast Fourier Transform (FFT) in native code, compiled by Clang, and Dalvik bytecode, compiled by Android Runtime, on Android?*

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# Libraries



# float vs double

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# Conclusions

Conclusion 1

Conclusion 2

Conclusion 3

# Questions?