



# Android Application Performance Analysis and Tuning

**HRDC Reg No - 10001297783**

**HRDC Fully Claimable Training**

**DESIGNED FOR**

Software Developers, Android Performance Engineers, Android  
Developers, Android Application Analyst and Students

**Who** are looking to enhance their understanding of  
**Android Application Performance Analysis and Tuning**



29 - 30 August 2024



09 AM - 5 PM



AC hotel, Marriott,  
Penang, Malaysia

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# Master Android Application Performance Analysis and Tuning

## Who is this course for?


This course is designed for Android developers who want to optimize app performance. Whether you're an experienced developer enhancing your skills or a professional seeking to understand performance bottlenecks, this training is ideal. Perfect for Android developers, mobile app developers, and performance engineers aiming to build efficient, high-performing apps.


## Why you should join?


In today's competitive app market, ensuring your Android applications run smoothly and efficiently is crucial. By mastering performance analysis and tuning, developers can significantly improve their app's responsiveness, battery usage, and overall user experience.

## What We Offer:

In our Android Application Performance Analysis and Tuning course, you'll receive:

 **Comprehensive Coverage:** Learn to track and analyze CPU, Memory, Battery, and Network usage to identify and resolve performance issues.

 **Practical Implementation:** Hands on training on Optimize loops, load images efficiently, and manage memory. Use tools like Memory Profiler and LeakCanary to fix memory leaks.

 **Solid Understanding:** Avoid common memory leaks, optimize UI and rendering performance, and handle asynchronous network requests. Use advanced tools like Network Profiler and Layout Inspector.

By the end of this course, you'll be able to optimize your Android apps for better performance and user experience.

## Course Outline

### Module 1 : Understanding and Analyzing Memory Usage

- Optimizing Your Loops
- Loading Images
- Analyzing Memory Using the Memory Profiler
- Tracking Allocations

### Module 2 : Avoiding Memory Leaks

- Finding Memory Leaks with LeakCanary
- Common Memory Leaks:
  - Static References
  - Anonymous Inner Classes
  - Non-Static Inner Classes

### Module 3 : Web-Related Issues

- Making Asynchronous Requests on a Background Thread
- Analyzing Results with the Network Profiler
- Using Your App While a Request Is in Progress

### Module 4 : UI Analysis and Optimization

- Understanding View Hierarchies
- Debugging Layouts with the Layout Inspector
- Optimizing UI and Rendering Performance
- Analyzing for Jank (Profiling GPU Render)
- Using Developer Options for UI Insights

### Module 5 : Battery Optimization

- Understanding Causes of Battery Drain
- Utilizing Doze Mode and App Stand-By
- Basic and Advanced Battery Drain Analysis
- Advanced Battery Monitoring
- Implementing JobScheduler
- Lazy First

#### Pre-Requisites:

- Android Application Development Experience

#### Duration : 2 Days

## By the end of this course!

### YOU WILL GAIN:

- ☀ Mastery of performance analysis techniques, including tracking and analyzing application CPU, Memory, Battery, and Network usage.
- 🔧 Advanced troubleshooting techniques for efficient identification and resolution of performance-related issues.
- ✅ Strategies to optimize app performance through effective practices for loops, image loading, and memory management.
- ⚙ Best practices for battery optimization, understanding causes of battery drain, and implementing energy-efficient solutions.

### If you struggle with:

- ! Identifying performance bottlenecks and effectively tracking and analyzing performance metrics in your Android applications.
- ! Addressing memory leaks and using tools like Memory Profiler and LeakCanary to detect and fix them.
- ! Optimizing UI and rendering performance to enhance the responsiveness and visual performance of your application's UI.
- ! Managing battery usage and implementing best practices to reduce battery drain and improve app efficiency.
- ! Handling asynchronous operations and ensuring smooth app performance during network requests.
- ! Keeping up with best practices and the latest performance optimization techniques and tools for Android development.

## Implementing our Android Application Performance Analysis and Tuning course will lead to:

- ✓ **Optimized app performance**, resulting in smoother and more responsive user experiences.
- ✓ **Improved resource management**, ensuring efficient CPU, Memory, Battery, and Network usage.
- ✓ **Enhanced code quality and maintainability**, reducing the occurrence of performance bottlenecks and memory leaks.
- ✓ **Expertise in advanced performance analysis tools**, empowering you to identify and resolve performance issues effectively.
- ✓ **Greater competitiveness in the app market**, with high-performing and energy-efficient Android applications.

## Timmins Training Consulting

Timmins Training is a leading provider of training services in Malaysia, offering HRDC Claimable Trainings, Corporate Trainings, Corporate Onboarding Training, and Consulting services.

With over 8 years of experience, we serve various domains including Embedded Software Development, Full Stack Development, Mobile App Development, 5G, Business Intelligence, and more.

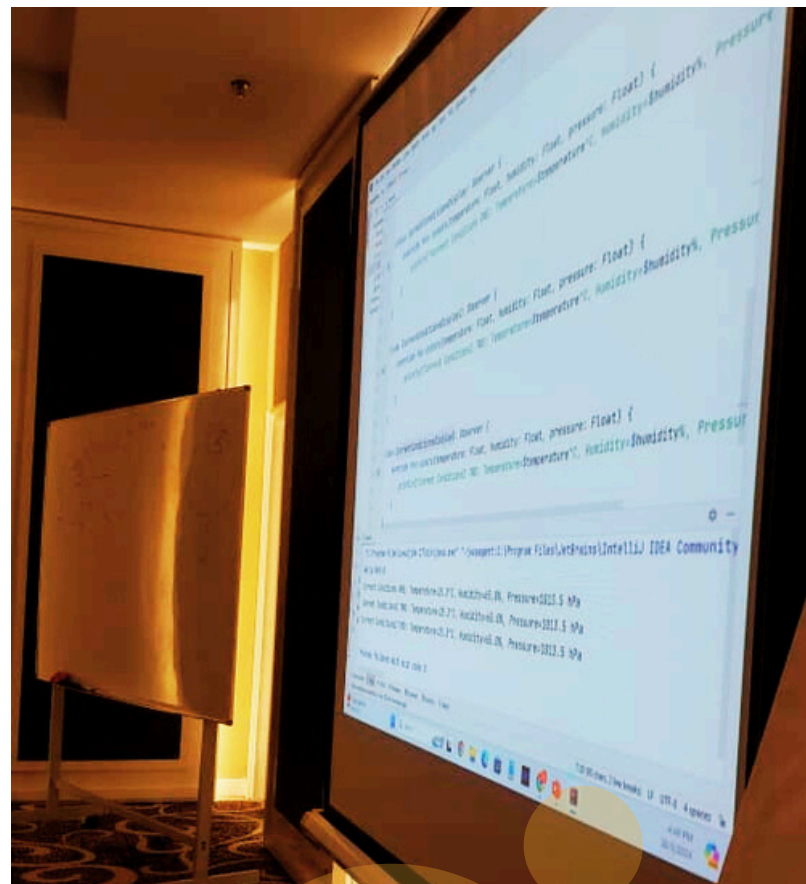
Our trainers are subject-matter experts with years of hands-on experience in their specialized areas. They bring practical insights to help you excel in your journey.

Empower yourself with Timmins Training Consulting and elevate your Kotlin skills to new heights!



# CONTACT US!

## Secure Your Spot!



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