



Debugging Android OS at Scale: AI-Powered Log Analysis

Varun Chitre,
Founder, CEO - logcat.ai,
Staff Engineer @ Esper,
13+ years in AOSP, LineageOS Maintainer

The Problem:

How We Debug Android OS Today

01

grep/search

grep for "ANR", "FATAL"
returns tons of matches.
Which one caused the
freeze followed by a crash?
Context is invisible

02

Manual correlation

system_server crash at
14:23:45—what triggered
it?
Manually jump between
logcat, dmesg, kernel logs

03

Time sink

2-4 hours average per
issue. ROM builders work
nights/weekends—time is
precious

04

Learning Curve

Takes years to know what
patterns matter. New
contributors struggle with
where to start

Enter AI:

What If AI Could Debug Like a Senior Engineer?

- **Follow leads step-by-step:** "Start with the crash, trace back to root cause"
- **Correlate across subsystems:** "Connect events in logcat, dmesg, kernel logs automatically"
- **Explain the 'why':** "Not just what failed, but why it failed"

Introducing logcat.ai

AI-Powered Log Analysis for Android

What It Does:

1. Deep Research

- Autonomous multi-step investigation
- Follows leads across log sources like an engineer would

2. System Intelligence

- Understands Android subsystems and their interactions
- Correlates events across logcat, dmesg, bugreport, ANR traces

3. Root Cause Analysis

- Explains what happened and why
- Provides evidence and timeline for each conclusion

Who is it for?

-  OEMs
-  Automotive
-  Device Manufacturers
-  AOSP Builders
- Semiconductor companies

OSS Program:

Free for individual developers
open-source projects

Apply at: <https://logcat.ai/c>



Demo!

Privacy & Security:

How We Handle Your Logs

1. Encryption

- AES-256 encryption at rest
- TLS 1.3 in transit
- Your logs are encrypted end-to-end

Browser-Based Redaction (Coming Soon)

- SafeLog-LM will run entirely in your browser
- Logs get redacted before leaving your machine
- Zero server-side PII exposure

2. SafeLog-LM: Open Source PII Redaction

- Fine-tuned model specifically for Android logs
- Apache 2.0 license on GitHub + HuggingFace
- Redacts emails, IMEIs, phone numbers, locations
- You can run it locally right now
<https://github.com/logcat-ai/safelog-lm>