NekoSpeak 🐱

Engineering Intelligence at the Edge

100% Offline • Ultra Low Latency • Privacy First

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The Problem: AI has a "Last Mile" Issue

In my work exploring **Fintech & RegTech**, I've seen how reliance on cloud APIs creates bottlenecks. For Voice AI on Android, this manifests as:

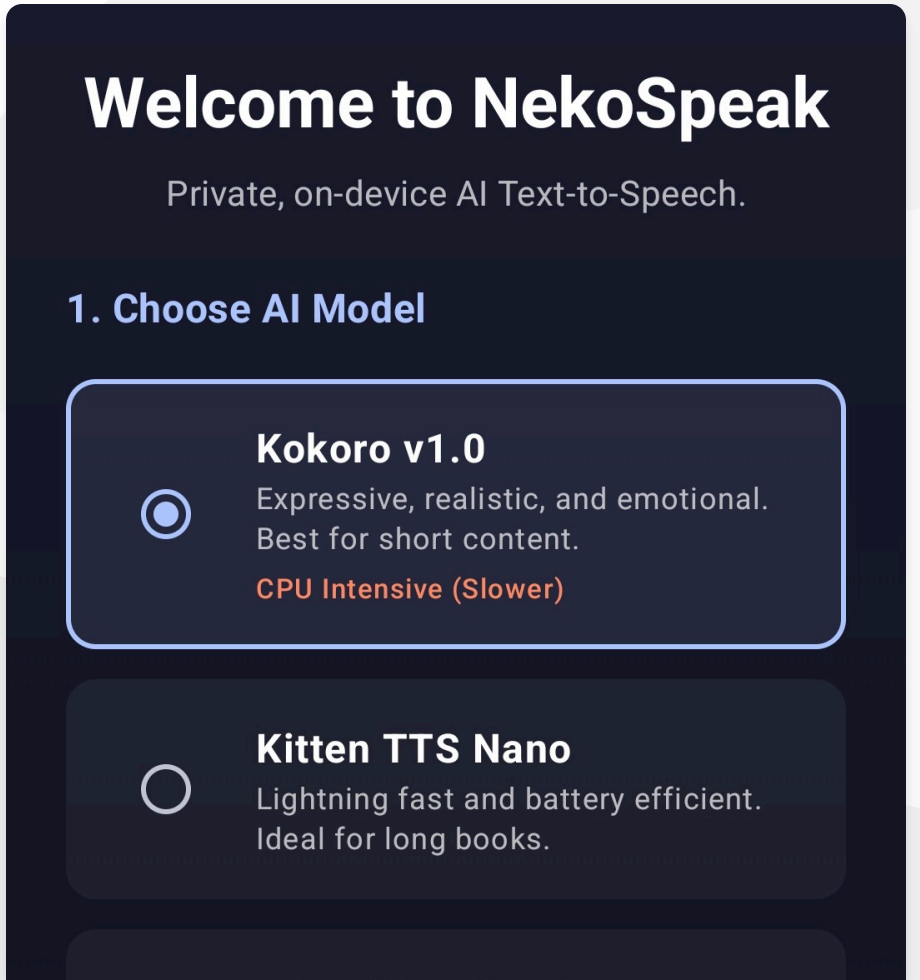
1. 🔴 **Latency**: Waiting for server responses breaks natural conversation flow.
2. 🔴 **Privacy Risks**: Sending sensitive audio data to the cloud is unacceptable for many use cases.
3. 🔴 **Robotic Fallback**: Traditional offline engines (`espeak`) sound unnatural.

> *__Goal__: Build a "Zero-Compromise" engine that runs mostly on-device.*

The Solution: NekoSpeak 🚀

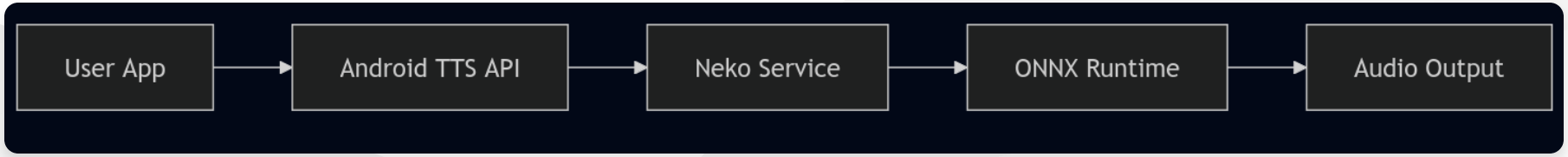
A drop-in replacement for the Android TTS ecosystem, bringing heavily quantized Large Audio Models (LAMs) to the mobile edge.

- **Triple Engine Architecture**:
  - 🧠 **Kokoro (82M)**: Human-level expressiveness.
  - ⚡ **Piper**: High-speed multilingual inference.
  - 🚗 **Kitten (Nano)**: Ultra-lightweight fallback.
- **100% Offline**: No internet required after download.



Technical Architecture ⚙️

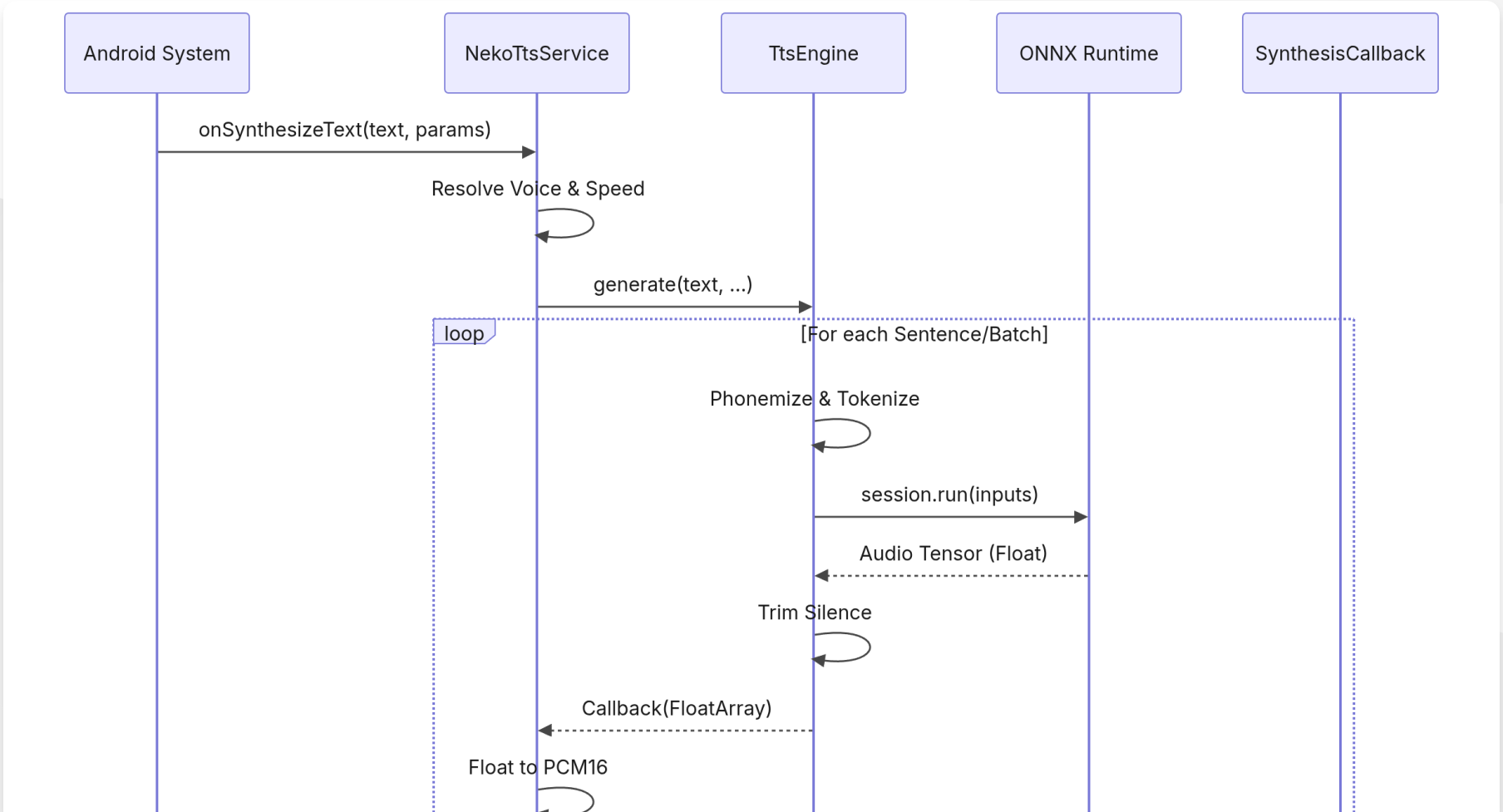
I architected a custom pipeline using **ONNX Runtime** and **C++ JNI Bridges** to optimize performance on mobile CPUs.



- **Smart Batching**: Dynamic buffering balances latency vs. context window.
- **Native Bridge**: Custom C++ wrapper for `libespeak-ng` phonemization.

Deep System Integration

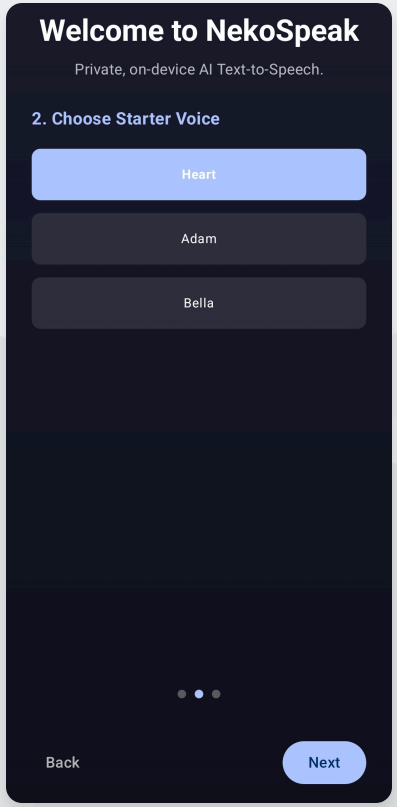
Unlike simple "wrapper" apps, NekoSpeak integrates deep into the **Android Framework**.



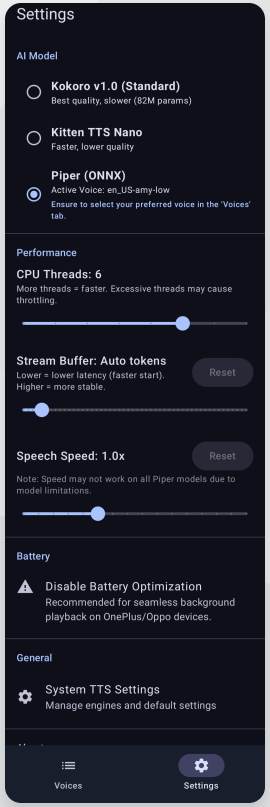
Product Showcase

Polished UX focusing on accessibility and ease of use.

Voice Selection



Settings & Config



Engineering Philosophy & Impact 🌟

This project reflects my approach to Product Engineering:

1. **Solve Real Problems**: Bridges the gap between "Cool AI Demo" and "Daily Driver Utility".
2. **Robust Engineering**: "Zero-Crash" architecture with graceful degradation (Cloud -> Local -> Nano).
3. **User-Centric**: Privacy by default, with no hidden analytics.

*Similar to my work on the **Singapore Location Intelligence MCP** and **Client-Side OCR**.*

About the Builder 👨‍💻

Sivasubramanian Ramanathan

Product Owner | Fintech, RegTech & Digital Innovation

PMP | PSM II | PSPO II

I specialize in taking messy, real-world complexity and structuring it into reliable products.

I am looking for my next role in Singapore: 🇸🇬

- **Focus**: Product Management, Payment Infrastructure, Digital Assets.
- **Value**: Bridging the gap between Policy, Tech, and Business.

Lets Connect 🤝

I am ready to bring this level of engineering rigor and product thinking to your team.

- 🌐 **Portfolio**: sivasub.com
- 💼 **LinkedIn**: linkedin.com/in/sivasub987
- 💻 **Code**: github.com/siva-sub/NekoSpeak

Download NekoSpeak v1.0.10:
github.com/siva-sub/NekoSpeak/releases