G R K Achyuth Nag

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Experience

Software Development Engineer - 2   *Bangalore, KA*
Nuclei ↗   *June 2024 – Present*

- Lead a team of 5 front end engineers in the Retail Banking Product, Merchant Marketplace, driving key business initiatives and delivering revenue generating projects. It's live in **12+ Indian Banks** (ICICI, SBI Bhim, BOB and more) and **1 MEA Bank** (Sohar International) and we do around 4 Million transactions a month.

- Developed and launched **Nuclei X**, an invite-only B2C app to showcase our flagship Android SDK for select key users. Designed and developed the Authentication and Payment Flows, back end and front end, ensuring seamless integration and robust security.

- Optimized the Nuclei's Android SDK footprint by **56%**, reducing size from **14.3 MB to 8 MB**, increasing adoption rate of the SDK.

- Boosted the Android SDK performance by offloading compute-intensive tasks to computation threads, achieving a **30%** faster initialization time and significantly enhancing user experience.

- Designed and developed a system to capture, store, and analyze **analytics and error events**, also built the Android SDK for the same to facilitate real-time reporting.

- Conducted a successful proof of concept to implement rate limiting for a high-cost API, leveraging **NGINX header-based routing** for optimized traffic distribution and **Traefik** for dynamic rate limiting. This initiative aimed at significantly reducing egress bandwidth costs while maintaining efficient traffic flow.

- Mentored interns and college graduates, provide technical guidance, code reviews, and helped accelerate overall onboarding process.

Software Development Engineer - 1   *Bangalore, KA*
Nuclei ↗   *June 2022 – June 2024*

- Played a key role in maintaining, securing, and optimizing our flagship Android SDK, ensuring high performance and security. Developed UI flows for both Android Native apps and Progressive Web Apps (PWAs) using **SvelteKit** and **Tailwind CSS** for streamlined, responsive user interfaces.

- Revamped the **Android Mobile Recharge service frontend**, enhancing user experience by introducing tagged recharge plans, an embedded coupon UI, and an improved pricing layout. These optimizations drove a **5% increase** in transaction volume.

- Remediated over **10+ security vulnerabilities** like Strandhogg Vulnerability (v1) ↗, Achieving SSL Pinning on our PWA applications, and many more, making our Native and Cross Platform categories more secure.

- Built and shipped, **Synapse**, a product extension of Merchant Marketplace, which offered a Merchant PWA experience to users. This product helped in speeding up or GTM from 3 months to 3 weeks.

- Contributed to **Svelte Vitals**, an in-house NPM library, by developing a modular solution for **language localization** and **custom font integration** across **Svelte UIs**. Enabled dynamic font control for each partner by hosting fonts on our CDN, ensuring brand consistency for each partner. Also optimized performance by benchmarking **Cumulative Layout Shift (CLS** <0.1) and **First Contentful Paint (FCP) <1.0** using Lighthouse to ensure seamless user experience.

- Built an in-house crashlytics tool called **No Errors Uncaught** that could decrease error count by **50%** and Incident Response from **1 day to 1 hour**.

- Migrated the Android SDK to **Android 13** and eventually **Android 14** within the given sunset timelines by Google. Involved challenges of keeping the SDK backward and forward compatible for partners to adopt the SDK as and when they needed it.

- Automated **Slack reporting** workflows to streamline production issue tracking and partner-raised integration concerns, significantly improving response times and boosting overall team productivity.

Software Development Engineer - Intern   *Bangalore, KA*
OrgFarm   *Jan 2021 – Feb 2022*
- Developed ERP forms in the Warehouse Admin Service using React JS with REST APIs, to help the warehouse personnel track the various operations that are carried out by the company.
- Assisted in designing the DB for the product.

Education

Nitte Meenakshi Institute Of Technology   *Aug 2017 – July 2021*
B. E in Information Science and Engineering
- CGPA : 8.68/10

Projects

Slingshot   *Github* ↗
- MVVM Boilerplate for Android: Slingshot provides a clean and scalable architecture with a predefined folder structure, including models, viewmodels, network, repositories, and utilities.
- Rapid App Launch: Simplifies project setup with ready-to-use configurations, enabling developers to quickly focus on app-specific features. Ready to develop in 10 minutes.
- **Tools Used:** Android, Kotlin, MVVM, Makefile

Go Benchmarks & POCs   *Github* ↗
- Developed a proof of concept to implement consistent hashing ↗ in Go, exploring its potential for canary release strategies. The experiment demonstrated how consistent hashing can be used to efficiently distribute traffic across different service versions for controlled rollouts.
- Explored and optimized data handling by testing the effects of passing by ↗ **value vs. reference**, analyzing memory allocation and performance impacts.
- Understood parallelism solutions in Go, leveraging **goroutines** to calculate prime numbers concurrently, improving execution speed and understanding concurrency handling ↗.
- Built a custom **thread pool** ↗ in Go to manage concurrent tasks, improving resource utilization and optimizing processing time.
- Investigated **database storage** techniques for variable-length integers ↗ and their impact on storage efficiency and retrieval speed.
- Tools Used: Go

Achievements and Publications

- Won **Nuclei's Internal Hackathon** (**competing against 10 teams**) by developing **No Errors Uncaught**, a solution to address the absence of logs and improve error tracking.

- Placed **Second (of 20)** in a coding competition organised by the college's coding club, **optimizePrime**.

- **GoGet:A Digital Shop Recommendation System to Empower Retailers using Machine Learning** ↗
  FABS Conference 2021

Technologies

Languages: Java (Fluent), Kotlin (Intermediate), Javascript (Intermediate), HTML (Intermediate), Tailwind CSS (Intermediate), Dart (Intermediate), Go (Novice)

Technologies: Android, Sveltekit, Flutter, MVP, MVVM, RxJava, SDK Building and Integration, WebViews, PWA, HTML, CSS, NGINX (novice), CDN, Github Actions

Interests: Violinist, Musician, Composer, Arranger, **write my own music** ↗ and an active part of my band, **Caramel Chutney**.