

# Noyal Joseph Binu

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## SUMMARY

Senior Mobile Engineer (6+ years) specializing in **React Native + TypeScript** development for production iOS and Android applications. Proven experience delivering **end-to-end mobile app lifecycle**, including **publishing apps to Apple App Store and Google Play Store**, release compliance, and versioning. Strong background in **performance optimization (CPU, battery, memory)**, debugging, **CI/CD pipelines**, automation testing, accessibility (WCAG), and scalable backend integration. Experienced collaborating cross-functionally with Product, QA, and Hardware/Firmware teams while maintaining high engineering quality standards.

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## SKILLS

- **Front-end: React Native (iOS & Android builds), Next.js, jQuery, D3, RxJS, Bootstrap, TypeScript, Responsive Design, FlutterFlow, PHP, Vue.js, HTML, CSS, Tailwind, Angular, React/Redux, Flutter,**
  - **Back-end & APIs: PHP, Laravel, Node.js/Express, Java/Spring Boot, PostgreSQL, REST, GraphQL, Microservices Architecture, JSON/XML, RabbitMQ, OAuth2/JWT, Kafka, WebSockets, WebRTC, PlanetScale (MySQL serverless), Vercel Functions**
  - **Mobile App Lifecycle: App Store / Play Store Publishing, Store Compliance, Release Management**
  - **Cloud & DevOps: AWS (EC2, S3, Lambda), GCP (App Engine, Cloud Run, Google Cloud Storage, Firewall), Docker, Kubernetes/AKS, CI/CD (Jenkins), Helm, Linux VMs, Tarfile Packaging, Vercel Deployment, GitHub Actions (Mobile CI/CD)**
  - **Testing & QA: Jest, React Testing Library, Detox, JUnit, Appium, Crashlytics, Performance Monitoring**
  - **Code Quality & Linting: SonarQube, Fortify, ESLint, Prettier**
  - **Methodologies: Agile/SCRUM, Mentoring, Data Structures & Algorithms, SLAs & Performance Benchmarks, WCAG Accessibility**
  - **Data & Persistence: PostgreSQL, MongoDB, Redis, Cloud Spanner**
  - **Tools: Git, Confluence, Jira, InVision, Chrome Developer Tools, Android Studio, Xcode, VS Code, React Native Debugger, Figma**
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## WORK EXPERIENCE

### Full Stack Engineer - TQG Inc

Aug 2025 – Present

- Owned end-to-end development of a **React Native mobile application (iOS + Android)** enabling real-time robot control for the Unitree G1 platform.
- Built real-time mobile features including **telemetry dashboards, low-latency command execution, and live video streaming.**
- Integrated **WebRTC and WebSockets** for real-time communication and achieved **<200ms latency** performance for streaming + data sync.
- Delivered and maintained production builds on **Apple App Store and Google Play Store**, handling release submissions, approvals, and versioning.
- Collaborated with firmware/hardware teams to ensure stable device communication over **Bluetooth and Wi-Fi connectivity.**
- Implemented mobile CI/CD automation using **GitHub Actions**, improving build reliability and reducing release turnaround time.
- Supported production debugging and performance tuning using **React Native** profiling and logging tools.
- Worked with device connectivity workflows involving **Bluetooth pairing** and network reliability.
- Implemented analytics + crash monitoring (Crashlytics/Sentry) and optimized app performance through profiling CPU, memory, and battery usage to improve stability.

### Senior Front-End Lead - BreatheIT Solutions Inc

Oct 2024 - May 2025

- Led a cross-functional team in transforming a **FlutterFlow prototype** into a production-grade **React Native platform**, improving **performance, stability, and maintainability** across mobile and web.
- Co-led the **web portal team** to deliver scalable **React applications** with seamless **backend integration**, responsive design, and **WCAG-compliant accessibility.**
- Architected and deployed **Spring Boot microservices** on **Google Cloud Platform (GCP)**, leveraging **Cloud Pub/Sub** for event-driven order processing and reducing **end-to-end latency by 30%.**
- Implemented **CI/CD pipelines** with **GitHub Actions** and **Jenkins**, enabling **zero-downtime deployments** and automated QA verification.
- Established a **shared component library** and **design system governance**, collaborating with **Product, Design, and Architecture teams** to ensure reusable, consistent UI/UX patterns.
- **Reduced crash rates by 40%** by introducing strict TypeScript typings, **Crashlytics/Sentry monitoring**, and automated ESLint/Prettier checks.
- Partnered with marketing to deliver **Optimizely CMS** sites supporting **A/B testing, personalization, and content-driven workflows.**

### Full Stack Engineer - Tata consultancy services

Oct 2020 - Jul 2023

- **Architected and shipped** enterprise-grade **React.js dashboards** backed by **Java/Spring Boot microservices** on **Google Cloud Platform (GCP)**, ensuring **99.9% uptime** and improving **rendering performance by 40%.**
- **Migrated** a large-scale **AngularJS** system to **React (v16+)**, introducing **custom hooks, modular UI libraries, and design tokens**, cutting code duplication by **35%** and boosting maintainability.
- **Containerized** and deployed applications with **Docker** and **Kubernetes (GKE)**, collaborating with **DevOps** teams to reduce **infrastructure costs by 25%** while improving scalability.
- Integrated **SonarQube, Fortify, and CI/CD pipelines** for **proactive code scanning**, enforcing **secure, zero-downtime deployments.**
- Enhanced front-end performance using **React.memo, useCallback, and virtualization (react-virtualized)** to optimize high-frequency financial dashboards.

- Championed WCAG 2.1 accessibility compliance, leading usability audits and remediations to improve inclusivity across enterprise modules.
- Developed scalable UI architecture using **React, Redux**, and performance patterns for enterprise dashboards with high-frequency data.
- Mentored junior developers, conducted **code reviews**, and established **internal React component libraries** and best practices to scale development across teams..

#### Web Developer - Freelance (Hybrid)

Aug 2018 – Aug 2020

- Developed responsive single-page applications using **Angular** (Components, Services, Modules) with **SASS** and **Bootstrap**, delivering pixel-perfect, mobile-first UIs across devices and browsers.
- Consumed and integrated **Java/Spring Boot** RESTful APIs (JSON/XML), collaborating with backend teams to implement paginated data workflows and robust error handling.
- Implemented **dependency injection**, custom **Directives**, and **RxJS** observables for dynamic form validation and real-time data binding in Angular modules.
- Automated CI/CD pipelines using **Docker, Jenkins**, and **GitHub Actions**, streamlining build, test, and deployment processes.
- Configured **Dynatrace** Real User Monitoring and ServiceFlow to capture page-view traces, surfacing frontend performance bottlenecks
- Optimized bundle sizes with lazy loading and code splitting through **Angular CLI**, achieving consistent sub-2 s initial load performance.

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#### EDUCATION

Illinois Institute of Technology, Chicago

Aug 2023 - May 2025

**Master of Science in Computer Science,**

APJ Abdul Kalam Technological University, Kochi, India

Aug 2016 - Sep 2020

**Bachelor of Technology in Electrical and Electronics Engineering**

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#### PROJECTS

##### Advanced Time Series Analysis for Repository Management

Aug 2023 - Dec 2023

- **Developed and deployed** LSTM, Prophet and StatsModels forecasting pipelines in Python; achieved 15% accuracy gain and integrated results into React dashboards
- Designed and implemented AI-enhanced, customer-facing features using **React, Node.js**, and **GraphQL**, collaborating with Product and Design to build a modular **Design System**, optimize **Core Web Vitals** and **accessibility**, and deliver responsive experiences across desktop, mobile, and tablet for hundreds of millions of searches.
- Streamlined real-time data ingestion on Kafka and WebSocket feeds to power live dashboards with sub-200 ms updates.

##### Biomedical Image Segmentation using U-Net Architecture

Aug 2024 - Dec 2024

- **Developed a deep learning model** that improved image segmentation accuracy for medical imaging, leveraging U-Net architecture and advanced neural network techniques.
- Embraced AI workflows and rapid iteration cycles to align model development with user feedback for production-grade deployment.
- **Explored machine learning infrastructure** capabilities to support future integration of reinforcement learning enhancements.

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#### PUBLICATIONS

**Publisher :** Institute of Electrical and Electronics Engineers (**IEEE**)

**Title :** [Artificial Intelligence Based Phonocardiogram Proposed for Cardiac Screening of School Children | IEEE Conference Publication](#)

**Conference :** 2020 International Conference on Futuristic Technologies in Control Systems & Renewable Energy (ICFCR)