

Ashok Bijoy Debnath

Experienced full-stack software engineer focused on building web and mobile apps.

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Relevant Experience

Principal Engineer, **OWVAL HEALTHCARE** 2023 – Present

- Built a B2B partner procurement platform on Java, Spring Boot & AWS.
- Engineered catalog & search services with Redis cache & Postgres FTS.
- Developed React/TypeScript frontend with multi-step partner onboarding.

Software Engineer 3, **PAYPAL** 2021 – 2022

- Delivered Wallet feature parity (bank funding, balance, withdrawal) to ~675k French overseas-territory accounts migrated to mainland France's legal framework ahead of a March 2022 anti-discrimination deadline.
- Shipped the Digital Wallet 2.0 landing page on a server-driven UI pipeline, with progressive 150ms skeleton loading and bank funding, withdrawal, and 3DS card-confirmation flows, plus reusable framework components.
- Built the in-app WebView layer of the tax and statements hub and inner-sourced React-Redux and Node.js changes across 4 web repos when the IRS lowered its 1099-K threshold to \$600.

Software Engineer L62, **MICROSOFT** 2019 – 2020

Software Engineer L61 2018 – 2019

- Redesigned search for ~7M large-screen Android users with a two-pane adaptive layout, persistent navigation rail, consolidated search bar, and zero-query surface with proactive contacts, upcoming events, and files.
- Delivered Samsung Note 10 pre-install features (POP3 support, Bixby deep links, Email Compose V2 rollout, boot ANR fix), reaching 5.3M activations with 87% retention, beating the 43% deal target by 44 points.
- Contributed to Microsoft's Fluent UI design system, the open-source subset of the team's internal Office UI framework. Adopted by Outlook, Word, Excel, PowerPoint, and external developers.
- Other notable contributions: S/MIME encryption, Kotlin Coroutines adoption, UI polish & font rendering, telemetry, accessibility, etc.

Senior Software Engineer, **MOBILEIRON (now IVANTI)** 2017 – 2018

- Instrumented Docs@Work with Mixpanel funnels, events, and Crashlytics.
- Introduced offline file access via cached favorites & background sync.

Senior Software Engineer, **MOTOROLA** 2015 – 2016

- Developed Motobody, a fitness app for watch & phone on Google Cloud.
- Integrated Google Maps for route tracking; featured in Play Store.
- Built a battery-saving sync via JobScheduler & Doze-aware idle windows.
- Also implemented custom goals, streaks, trend charts, and insights.

Senior Software Engineer, **SAMSUNG** 2014 – 2015

Software Engineer 2013 – 2014

- Built MobileTV for Japan & Korea with scheduled recording, EPG, & PiP.
- Collaborated on Group Play P2P over WiFi Direct with NDK and ZeroMQ.

Selected Projects

CRDT Engine

A real-time sync engine where clients hold full local copies and apply edits instantly. Offline edits converge through mathematically guaranteed merge semantics.

TypeScript • WebSockets • IndexedDB • Fugue CRDT

Canvas Editor

A vector graphics editor bypassing the DOM, using WebGL 2 for GPU-accelerated rendering with instanced draw calls, Quadtree spatial indexing, and MSDF text.

TypeScript • React • WebGL 2 • Rust/WASM

Code Archaeologist

A semantic code search engine that indexes structural relationships in a Neo4j graph and answers queries via Cypher translation with vector similarity.

Python • TypeScript • Neo4j • Tree-sitter

Skills

Programming Languages

Java, Kotlin, JavaScript, TypeScript, Python

Libraries & Frameworks

React, React Native, Android, Spring Boot, Node.js, Tailwind

Databases & Messaging

PostgreSQL, SQLite, Redis, Kafka

Tools & Platforms

Git, Github, AWS, GCP, Docker, Kubernetes, CI/CD, IntelliJ, Android Studio, Figma

Achievements

- 2nd rank at Motorola worldwide hackathon (bluetooth gesture app)
- World rank 152 in Samsung Topcoder programming contest
- Superstar performer award for contributions & impact at Samsung
- 1st in IAIS Math from University of New South Wales, Australia
- 2nd rank (Silver) in Mathematics Olympiad
- 23rd in India in 7th National Aptitude Test

Education

NATIONAL INSTITUTE OF TECHNOLOGY, SILCHAR

Bachelor of Technology in Electronics and Communication Engineering

Interests

Competitive programming. Sports: tennis, table tennis, chess. Sometimes books.