#### Contact

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## Top Skills

**UIKit** 

Realm Database
Technology Leadership

## Languages

Hindi (Native or Bilingual) English (Full Professional)

#### Certifications

Information Security and Ethical Hacking

iOS App Development: Essential Courses

iOS Development: Architecture Practical Design Patterns in Swift

#### **Publications**

Detection of Repackaged Smartphone Applications On Android

Behaviour-analysis-of-machine-learning-algorithms

# **Ankush Kumar Singh**

Tech Lead at SplashLearn. Problem Solver. Technology Enthusiast. Analytical Thinker. Ex- Utopia. Ex- Citibank. Ex- Infosys. IIT Roorkee (CS).

Gurugram, Haryana, India

# Summary

Accomplished Software Engineer with over 10 years of extensive experience in designing, building, and leading mobile application projects. Passionate about exploring and integrating new technologies. Expert in iOS and cross-platform application development, proficient in Swift, SwiftUI, UIKit, Objective-C, and Flutter.

Currently leading and mentoring teams in both iOS and Flutter development. Successfully spearheaded a complex integration project, seamlessly merging a legacy Android app with a modern Flutter codebase, resulting in improved performance, reduced redundancy, and enhanced user experience.

#### Education

• Dual Degree (B.Tech + M.Tech) in Computer Science, IIT Roorkee

### **Technical Proficiency**

- Swift: Expert (Regularly work)
- Flutter & Dart: Advanced (Regularly work)
- Objective-C: Intermediate (Work intermittently)
- Java: Intermediate (Previous experience)
- C/C++: Intermediate (Previous experience)
- Kotlin: Intermediate (Recent project leadership)
- JavaScript, HTML/CSS: Beginner (Previous experience)

#### Key Skills

- Interface Builder, Realm, Git, Reactive Programming (RxSwift),
   MVVM, Dependency Injection, Unit Testing
- Project Management, Time Estimations, Design Reviews
- Databases: SQLite, Realm, MongoDB
- Frameworks: Play Framework

#### Tools

Xcode, Android Studio, VS Code, Slack, Zoom, GitHub, GitLab, JIRA, Trello, FIGMA, Zeplin, Mixpanel, Firebase, Realm Studio, Mongo Browser, Eclipse

#### Achievements

- 1. Publication: Behavior Analysis of Machine Learning Algorithms (ICACT 2013).
- 2. Poster Presentation: "Detection of Repackaged Smartphone Applications on Android" at IIT Kanpur Symposium (2013).
- 3. Secured AIR 1469 in IIT JEE, 2008.
- 4. Secured AIR 607 (SR 6) in AIEEE, 2008.
- 5. Secured AIR 7192 in IIT JEE, 2007.
- 6. Secured AIR 7604 (SR 377) in AIEEE, 2007.

#### Recent Leadership Experience

- Led iOS and Flutter development teams, managing technical direction, mentorship, and overall project lifecycle.
- Drove the successful integration and launch of a hybrid Flutter-Android app, enhancing the existing legacy Android application infrastructure.
- Implemented rigorous development standards and workflows, significantly improving code quality, app performance, and release reliability.

# Experience

SplashLearn

**Technical Lead** 

December 2017 - Present (7 years 6 months)

Gurgaon, India

SplashLearn is a scientifically designed, game-based curriculum covering Pre-K to Grade Five.

Currently leading a cross-functional team of 5 engineers across iOS, Android, and Flutter platforms. Spearheaded major feature rollouts, including server-driven UI, dynamic recommendations, multi-parent login, curriculum delivery,

Spanish language support, and version-controlled game downloads with autoupdate.

Led the successful integration and relaunch of the Android app by merging an outdated codebase with a modern Flutter implementation—ensuring seamless performance, code reuse, and consistent UX across platforms.

Modularized core iOS components into Swift packages using SPM, including data storage (via Facade pattern), asset management (via dependency graphs), and Apple Sign-In. This improved reusability, testability, and long-term maintainability.

Built a background downloader to proactively fetch game assets, cutting initial game load times significantly and improving user engagement.

Implemented a patch-based download mechanism that identifies and downloads only changed files during game updates, reducing CDN costs and improving update efficiency.

Architected a unified datastore layer supporting keychain, user defaults, plist, in-memory, and file-based storage—all through a clean, consistent API using the Facade pattern.

Designed a dependency-driven asset management system that supports dynamic updates and OTA (over-the-air) delivery of bug fixes and enhancements.

Actively involved in triaging and resolving production-critical issues, ensuring app stability and performance at scale.

Skills: Swift, Objective-C, Kotlin, Dart, Flutter, iOS Development, Android Development, Architecture Design, Team Leadership, Dependency Injection, Modular Code Design

Utopia Innovations
Tech Lead, iOS Developer
July 2016 - December 2017 (1 year 6 months)
New Delhi Area, India

Utopia (Startup) — Social & Event Organizing Platform

Played a key role in building Utopia's tech ecosystem from the ground up—including mobile apps, APIs, and web infrastructure—for a social platform that connected users through events and content.

- iOS Development: Built the native iOS app in Swift along with reusable frameworks to accelerate future feature development and improve maintainability.
- Backend Engineering: Designed and developed scalable RESTful APIs using the Play Framework with Java; hosted and managed infrastructure on AWS for high availability.
- Cross-Platform Leadership: Guided development efforts across Android and web teams, ensuring architectural consistency and delivery quality.
- Real-Time Chat: Architected and implemented a real-time chat system using socket.io and Node.js, enabling seamless communication across iOS, Android, and web platforms.
- Tech Evaluation: Proactively identified and introduced new tools and technologies to improve product value and streamline team workflows.
- Team Leadership: Led a cross-functional team of 5 engineers, overseeing end-to-end design and development across all platforms.
- ML Integration: Developed a machine learning–based tool to automatically validate profile images by classifying human vs. non-human faces.
- Content Intelligence: Performed semantic analysis on user-submitted articles and implemented a recommendation engine that surfaced relevant content based on user interests and behavior.

Citi

iOS Developer

March 2015 - June 2016 (1 year 4 months)

Citibank - iOS Application Development

Contributed to the global iOS app initiatives at Citibank, supporting both native and hybrid development efforts across multiple international markets.

- Native App Development: Designed and implemented core modules of the iOS Citibank app in Swift for North America and Australia, ensuring performance, compliance, and scalability.
- Hybrid App Development: Delivered hybrid app solutions for regions including Brazil, Hong Kong, and Singapore, enabling faster rollout and feature parity across geographies.
- Feature Implementation: Developed key functionalities such as ATM Locator,
   CitiPass, and Card Activation, enhancing user engagement and self-service capabilities.

- Architectural Contribution: Participated in designing the architecture for the next-generation Global iOS app to support unified codebase and modular development.
- UI Automation Testing: Implemented automated UI testing to ensure the stability and reliability of critical user-facing modules across builds and regions.

#### Infosys

Technology Analyst
July 2013 - March 2015 (1 year 9 months)

E-commerce Web Platform – Full-Stack Development & Optimization

Contributed to enhancing high-traffic e-commerce web flows, with a focus on performance tuning, feature development, and technical innovation.

- Production Stability: Resolved complex, high-impact bugs in live environments, improving overall user experience and site reliability.
- Technical Strategy: Analyzed competitor products and technologies, providing actionable recommendations to inform product and tech decisions.
- Solution Design: Delivered innovative, scalable technical solutions to support evolving product ideas and customer-facing features.
- Social Integration: Implemented social sign-on (Facebook, Twitter) using Gigya APIs, integrating with AngularJS on Node.js and ATG frameworks.
- Backend & CMS Development: Built key pages (e.g., business page) using ATG CMS and Java, supporting dynamic content and robust server-side rendering.
- Client Collaboration: Partnered directly with clients to define requirements, design solutions, and ensure delivery aligned with business goals.

#### Infosys

Engineer Intern May 2011 - July 2011 (3 months)

Cloud Service Provider Gateway – Decision Support Tool

Developed a gateway tool to help organizations select the most suitable Cloud Service Provider based on specific requirements around cost, performance, and security.

- Designed and implemented the system using Java with MS Access as the backend.
- Enabled data-driven decision-making by comparing cloud offerings across multiple dimensions.

• Helped reduce cloud adoption risk and improved cost-efficiency for targeted organizational use cases.

Nysa Infotech Engineer Intern June 2010 - July 2010 (2 months)

Medical Record Management System – Java Application

Developed a desktop-based medical software solution using Java with MS Access to streamline patient record management for clinics.

- Enabled secure storage and retrieval of patient information, appointments, and medical history.
- Improved operational efficiency for small-scale healthcare providers through automation and digital recordkeeping.

# Education

Indian Institute of Technology, Roorkee

Master's degree, Computer Science · (2008 - 2013)

Indian Institute of Technology, Roorkee
Bachelor's degree, Computer Science · (2008 - 2013)

Ishan International Public School

12th, Higher Secondary Certificate(HSC) · (2006 - 2007)

Ishan International Public School 10th, Matriculation · (2004 - 2005)