

# AKSHAY KALUCHA

Software Engineer  
Expert in Mobile application development  
Chicago, IL

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## EDUCATION

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### Illinois Institute of Technology

*Masters of Science in Information Technology*

Chicago, IL

*Anticipated Graduation: Nov 2024*

- **Concentration:** Software Engineering

### University of Delhi

*Bachelor of Science in Computer Science (Ist Division)*

New Delhi, India

*Jun 2018 – Aug 2021*

- **Concentrations:** Physical Science, (Mathematics & Computing)
- **Courses:** Calculus and Geometry, Android Programming, Design & Analysis of Algorithms, Data Structures, Object-Oriented Programming, Computer System Architecture, Probability & Statistics, Linear Algebra

## EXPERIENCE

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### HYPD Store

*Software Engineer*

New Delhi

*Dec 2021 - Aug 2022*

- Used Core Data for persistent storage, reducing redundant network requests.
- Designed p2p data-channel using webRTC for video streaming, scaling it parallelly to run encoding, caching and validation.
- Worked with backend engineers to develop server-driven UI in SwiftUI for hypd store.
- Overhauled software architecture in MVVM, utilising async/await and concurrency to reduce memory leaks which significantly improved the on-screen time by 40%.
- Implemented Push-Notifications, Deep-Linking and in-app notifications.

### Dept. of Mathematics, University of Delhi

*Research Intern, Guide Prof: Dr. Umesh Kumar*

New Delhi

*Nov 2020 - Jan 2021*

- Implemented a model that applies multinomial naive bayes classification on a comprehensive labelled dataset of around 240k Twitter users to predict the probability of them not being COVID'19 vaccinated.
- After model training, we identified an optimal classification threshold, based on F1 score on validation set. The model was then evaluated to achieve reasonable scores.

### Intellify

*Software Developer Intern*

New Delhi

*fall 2019 and winter 2020*

- 115 Prs Merged, 550 Contributions.
- Wrote 6000+ lines of code, released 3 major features.
- Designed MVC architecture for the web app and built OTP based login system, JWT Auth, sessions, and Push-Notifications for android app users.
- Fixed lots of bugs, resolved lots of jira tickets and sentry issues.

## PROJECTS

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**WireBase:** A real-time Node.js editor that generates and displays code in readable form

**Pictureskew:** Open-source human-computer emotion detection platform for research to smartfy Indian general stores

**IIT Stream:** Multi-client video lecture streaming platform for IIT students

**PyCalc:** Neural network package to solve ordinary and partial equations

## SKILLS

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**Proficient:** Javascript, Swift, Java, Python

**Mobile:** SwiftUI, UIKit, Kotlin, React-Native, Cocoa Touch, Objective-C

**Web:** React, Express, Node, Nextjs

**Utilities:** Shell Utilities, Git, PostgreSQL, MongoDB, Firebase, LaTeX

## EXTRACURRICULAR

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Exploited and patched the zoobar server as part of Computer Systems Security Course.

Developed iOS app in swiftUI which was a Websocket Client for a Websocket Server hosting multiplayer game.

Awarded the graduate pathway scholarship by college of computing at Illinois Institute of Technology, 2022.

Mentored Code for Safe India hackathon at Indian Institute of Technology, Delhi, 2020.