

# Adesh Pandey

Full-time Software Engineer

**Location:** Kathmandu, Nepal

**Email:** [adeshpandey333@gmail.com](mailto:adeshpandey333@gmail.com)

**GitHub:** [github.com/Adesh-Pandey](https://github.com/Adesh-Pandey)

**LinkedIn:** [linkedin.com/in/adesh-pandey-45aa371bb](https://linkedin.com/in/adesh-pandey-45aa371bb)

**Portfolio:** [adesh-pandey.github.io/Portfolio](https://adesh-pandey.github.io/Portfolio)

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## Professional Summary

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Full-time Software Engineer at Synthesis with nearly 2 years of experience building high-performance web applications and mobile platforms. Specialized in React, TypeScript, Next.js, and full-stack development. Currently pursuing Bachelor's in Electronics Engineering at Pulchowk Engineering Campus while maintaining full-time employment. Proven track record of delivering impactful features including authentication system migrations, iOS applications, and complex interactive learning components.

## Experience

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### Software Engineer - Full-time

April 2023 - Present

#### Synthesis

US-based edtech startup

#### Authentication System Migration

- Migrated authentication from server-side to client-side architecture, improving page load latency by 10x
- Significantly enhanced user experience across the entire application

#### iOS Application Development

- Led development of Synthesis iPad app using Swift and WebView architecture
- Achieved 50-60% user adoption, becoming the preferred platform for majority of users
- Responsible for ongoing maintenance and feature development
- [View on App Store](#)

#### Interactive Learning Components

- Developed dozens of complex interactive learning tools and educational games using React, Redux, and HTML within Next.js
- Performance-focused React-based games with cross-platform compatibility and optimized state management

#### Full-Stack Platform Infrastructure

- Own all Account and Billing systems with Stripe and Apple payment integrations
- Built complete backend-to-frontend infrastructure for referral and affiliate programs
- Implemented A/B testing system for purchase modal experiments to optimize conversion
- Handle Android tablet support for both institutional and consumer user base

#### Initial Freelance Project

- Delivered 2-week freelance project building real-time interactive application with Framer Motion, React TypeScript, WebSockets, and Express

- Transitioned to full-time role based on execution quality, delivery speed, and effective communication

## Education

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### Bachelor's in Electronics Engineering

Currently in 3rd Year, 6th Semester

#### Pulchowk Engineering Campus

Tribhuvan University, Nepal

*Concurrent with full-time software engineering work*

## Open Source Contributions

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### Framer Motion

Identified and resolved critical type definitions issues following the Motion v2 package split. Submitted pull request that was merged and approved by project maintainer Matt Perry.

[View Matt Perry's Response →](#)

### Matrix SDK (React Based)

Contributed UI bug fixes and styling improvements to the React-based Matrix SDK.

## Selected Projects

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### TrackTheTrap.com

Chrome extension for monitoring and managing YouTube usage. Provides visibility into video and Shorts consumption metrics with configurable count-based limits and automatic blocking functionality.

[Visit Project →](#)

### Pathfinding Algorithm Visualizer

Interactive visualization tool for pathfinding algorithms including BFS, DFS, and Dijkstra. Educational project demonstrating algorithm behavior with real-time visual feedback.

[Try the Demo →](#)

### Sorting Visualizer

Interactive visualization of common sorting algorithms including Merge Sort, Quick Sort, Insertion Sort, Selection Sort, and Heap Sort with real-time animations.

[Try the Demo →](#)

## Technical Skills

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**Primary Stack:** Next.js, React, TypeScript, Redux, Tailwind CSS, tRPC, Framer Motion

**Backend & Tools:** Express, Node.js, WebSockets

**Mobile & Payments:** Swift, Stripe, Apple IAP

**Third-Party Integrations:** Statsig, Fullstory, Axiom, Segment

**Deployment:** Vercel

## Key Achievements

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- Improved authentication system performance by 10x through architectural migration
- Built iOS application adopted by 50-60% of active users
- Developed dozens of production-ready interactive learning components
- Successfully transitioned from freelance to full-time position within 2 weeks
- Maintained full-time engineering role while pursuing engineering degree
- Contributed to major open source projects (Framer Motion, Matrix SDK)