

Suraj Pathak

Kathmandu, Nepal

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Professional Summary

Full-stack software engineer focused on backend-centric web systems, API architecture, and data-driven applications. Experience building production-oriented web platforms using TypeScript-based server frameworks and modern React ecosystems. Strong background in REST service design, database modeling, containerized development workflows, and system-level debugging. Academic work includes applied machine learning research involving parameter-efficient model adaptation.

Skills

Languages	TypeScript, JavaScript, Python, SQL, C#.
Backend Engineering	NestJS, Node.js, REST API architecture, authentication systems.
Frontend Engineering	Next.js, React, Zod, Redux Toolkit, component-driven UI systems.
Databases	MySQL, MongoDB, PostgreSQL, relational schema design, document modeling, query optimization.
Infrastructure & Tools	GIT, Postman, Docker, Swagger.
Miscellaneous	Problem-solving, Research, Collaboration,

Work Experience

8 Peaks Labs – (Frontend) Educampaign Consultancy

Jul 2025

- Engineered responsive user interfaces using **Next.js**, implementing modular component architecture and structured routing.
- Designed scalable UI components supporting maintainable feature expansion and consistent design patterns across the application.

8 Peaks Labs – (Full Stack) E-Commerce Platform Development

Jan 2026

- Designed and implemented backend services using **NestJS**, structuring modular APIs for product catalog.
- Built and maintained relational database using PostgreSQL, including schema design, indexing strategies, and optimized queries.
- Implemented DTO-driven request validation and structured controller/service architecture to enforce separation of concerns across backend modules.
- Developed front-end product interfaces using Next.js integrated with backend REST APIs.
- Documented APIs and testing workflows using **Swagger**.
- Containerized backend services using **Docker** to ensure consistent development environments and reproducible builds.

Academic Projects

Student Report Card Extraction Using Document Understanding Transformer (DONUT)

TU 2025

- Developed an automated system for extracting structured academic data from student report cards using the Donut Model.
- Fine-tuned the model on institutional mark sheet datasets to extract fields such as student name, roll number, subjects, and grades without requiring traditional Optical Character Recognition pipelines.
- Built a web application to present extracted data in structured form for analysis and institutional record management.

Open Source Contributions

Seal Notes

Dec 2024

- Resolved input-handling defects affecting password encryption workflows by correcting Enter-key event processing during credential creation and decryption.

Education _____

Tribhuvan University Kathmandu, Nepal

BSc. Computer Science and Information Technology (BSc.CSIT) Expected Graduation June 2026

- **Relevant Courses:** Artificial Intelligence, Database Management Systems, Operating Systems, Cryptography, Computer Graphics, Design and Analysis of Algorithms

Languages _____

English Full Professional Proficiency

Nepali Native Proficiency