

Riddi Kumar Shrestha

Software Engineer — Machine Learning & Full-Stack

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Summary

Software engineer with 7+ years of experience across machine learning and full-stack development. Currently leads development of an AI-enabled booking platform at Nepit Solutions, architecting the application, owning its data layer, and managing the underlying server infrastructure. Earlier experience includes building and deploying machine learning models, and delivering web applications and system integrations for international clients across the hospitality, government, and multi-level marketing sectors. Also teaches computer science at the university level as a part time lecturer.

Core Competencies

Languages: Python, Java, PHP, JavaScript, SQL / T-SQL, LaTeX

Machine Learning & Data: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, BeautifulSoup

Web & Frameworks: Django, Flask, FastAPI, Streamlit, CodeIgniter, WordPress, REST APIs, jQuery, AJAX, JSON, Bootstrap

Databases: MySQL, SQL Server, T-SQL, Stored Procedures, PostgreSQL

Infrastructure & Tools: Linux, Docker, Git, GitHub

Professional Experience

Software Engineer

Nepit Solutions Pvt. Ltd.

Apr 2025 – Present

- Lead development of an AI-enabled online booking system, developing and maintaining full-stack web applications with a focus on scalability, performance, and user-centric design.
- Manage server configuration and deployment across Linux environments, ensuring high availability and security for production applications.
- Own database schema design, query optimization, and general database management for production systems.
- Build responsive, cross-browser frontend interfaces using HTML5, CSS3, Bootstrap, and JavaScript.

Software Engineer

CodigoTech Pvt. Ltd.

Feb 2022 – Mar 2025

- Developed and deployed machine learning models using PyTorch and TensorFlow, iterating on architecture and training strategy to improve prediction accuracy and reduce inference time.
- Ran exploratory data analysis, feature engineering, and feature scaling to prepare data pipelines for model training.
- Partnered with the team on algorithm selection, working through the underlying mathematical intuition to choose the right model for each problem.
- Built and performance-tested RESTful web APIs, and scraped and structured web data using BeautifulSoup.

Software Engineer

Business Intelligence Technology Solutions (BiTS)

Jul 2015 – Apr 2019

- Developed web applications using Java, PHP, and front-end technologies for business clients.
- Optimized complex T-SQL queries and stored procedures to reduce execution time and improve system performance.
- Diagnosed and resolved slow-running production queries using SQL Profiler and SQL Server Management Studio.
- Performed code reviews and debugging, including capturing and analyzing network traffic with Fiddler.

Selected Projects

Online Booking System — *Global clients, leisure/entertainment/hospitality*

- Configure and customize the Booked.it platform for international clients across the UK and Europe, tailoring booking flows and payment gateways to specific business requirements while collaborating remotely across time zones.
- Integrate the platform with client servers for data synchronization and security compliance; write custom scripts to automate workflows, manage complex booking rules (lane management, group reservations, dynamic pricing), and connect with EPOS, messaging, and loyalty systems.

- Clients include *The Brunch Club* | *Lane7* | *Rollacity* | *Spinner* | *Dereham Strike Bowl* | *Ludlow Racecourse* | *Manchester PitchGolf*, *Bugsys Bowling* | *Hackers POS*.

ePopInfo — *Government population information system*

- Built a national-level population data portal for government use in Java and PostgreSQL, with interactive filtering and drill-down across demographic categories.
- Created RESTful API endpoints for external systems and an automated pipeline for processing census datasets.

MLM System — *Multi-level marketing platform, European client*

- Built the platform on CodeIgniter and MySQL, implementing sponsor tree algorithms for direct, level-based, and performance-based commissions.
- Designed a multi-currency, multi-gateway (PayPal, Stripe) payout system and an admin dashboard with real-time analytics; ensured GDPR compliance for European user data.

Additional full-stack projects include FRTC Sarlahi (Forest Research & Training Center portal), BiTSi Inventory Solution, RPPM IMS System, an SMS notification platform for Life Insurance Corporation of Nepal, and Sabha Nepal ERP.

Education

Master of Information System Engineering	2024
<i>Gandaki College of Engineering and Science, Pokhara</i>	

Bachelor of Computer Engineering	2015
<i>Kathford Int'l College of Engineering and Management, Kathmandu</i>	

Research

LVEF Estimation from Echocardiography Video	<i>Independent Research, Apr 2025 – Present</i>
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- Designed and implemented an end-to-end contrastive learning pipeline in Python to estimate left ventricular ejection fraction (LVEF) directly from echocardiography video, using the EchoNet-Dynamic dataset.
- Built a ResNet-18 encoder combined with a multi-head self-attention module for temporal modeling across video frames, trained jointly with NT-Xent and triplet-margin contrastive losses.
- Authored a full literature review and research report covering the modeling approach and experimental design; currently finalizing results and preparing a journal submission.

Teaching Experience

Lecturer (Part-time), St. Lawrence College, Kathmandu	Apr 2023 – Present
Lecturer (Part-time), Institute of Engineering, Thapathali	May 2023 – Oct 2023
Lecturer (Part-time), Janamaitri Multiple Campus, Kathmandu	Jul 2018 – Jan 2021

Certificates

- Programming for Everybody (Getting Started with Python), University of Michigan (Coursera)
- Python Data Structures, University of Michigan (Coursera)
- Using Python to Access Web Data, University of Michigan (Coursera)
- Supervised Machine Learning: Regression and Classification, DeepLearning.AI (Coursera)
- Neural Networks and Deep Learning, DeepLearning.AI (Coursera)
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, DeepLearning.AI (Coursera)

References

Dr. Badri Adhikari
St Louis, Missouri, United States