Utkarsh Rajput

Machine Learning Engineer

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SUMMARY

Software Developer and AI Researcher with over **1 year** of practical experience building innovative solutions across **Machine Learning, Deep Learning,** and **Full-stack development**. Skilled in **Python, PyTorch, Django,** and **REST APIs,** with proven experience developing projects such as **local-LLM-kit, Continual-Learning System** and **Dynamic Neural Radiance Fields**. Currently pursuing a **Bachelor of Engineering (Software Engineering, Honours)** at **UNSW**, actively involved in research projects focused on cross-lingual NLP, AI-driven investment strategies, and predictive analytics. Passionate about using technology to solve real-world challenges, improve user experiences, and support education initiatives through mentorship and open-source collaboration.

EMPLOYMENT HISTORY

Software Engineering Project lead

May '25 — Present New Delhi, India

Indermoney Services Private limited

- Spearheaded the complete transformation of legacy Microsoft Access-based banking systems to a scalable, full-stack centralized web application, enabling seamless real-time synchronization and robust transaction management for 150+ kiosks servicing 30,000+ unbanked individuals.
- Designed and developed a secure money transfer solution, streamlining digital financial services across a growing network of kiosk points, dramatically improving reliability, scalability, and operational efficiency.
- Delivered user-friendly digital banking solutions, resulting in a 30% increase in customer base and expanded access to financial services in underserved communities.
- Built and maintained enduring relationships with 20+ key stakeholders across various sectors, achieving 95% satisfaction through clear, proactive communication, technical support, and consistent delivery.
- Orchestrated and led operational review meetings with a cross-functional team of 10, successfully implementing a Corporate Expense Management Solution for 5 multinational clients reducing processing times by 60%, slashing operational costs by 40%, and consistently surpassing SLA and KPI benchmarks.
- Engineered and deployed a robust, automated stock management platform for MicroATM services, replacing inefficient Excel-based tracking in 50 retail outlets; reduced stock discrepancies by 45% and boosted monthly transaction volume by 40%.
- Integrated advanced AI-driven report generation systems, enabling the creation and validation of daily, weekly, and monthly reports, supporting data-driven decision-making for leadership and regulatory compliance.

Artificial Intelligence Developer

Dec '23 — Feb '24

SKOLAR

Bengaluru, India (Remote)

• Developed and optimized AI models to address specific business challenges and improve decision-making. Collaborated with data scientists and engineers to integrate AI solutions seamlessly into existing systems. Performed data preprocessing, feature engineering, and model evaluation to boost performance and accuracy. Presented technical findings and project outcomes to stakeholders, demonstrating the real-world impact of AI-driven solutions.

Website Developer Intern

May '24 — Jul '24

Inder Money Services Pvt Ltd.

New Delhi, India

• Developed responsive, user-friendly websites using HTML, CSS, and JavaScript, ensuring an optimal experience across devices. Collaborated with design and content teams to create visually appealing and functional web pages. Implemented SEO best practices and cross-browser compatibility measures to enhance online visibility. Optimized site performance through code refactoring and effective resource management.

Software Development Head

Sep '23 — May '25

Enigma Technical Society

Manipal, India

• Led a cross-functional team in developing innovative software solutions, managing the complete development lifecycle from ideation to deployment. Implemented agile methodologies and best coding practices to enhance efficiency and quality. Coordinated project planning, code reviews, and regular progress updates to ensure timely delivery of projects. Mentored junior team members, fostering a culture of continuous improvement and technical excellence.

Artificial Intelligence Job Simulation

Nov '23 — Nov '23

• Conducted comprehensive exploratory data analysis using Python and Google Colab for Gala Groceries. Developed a Python module to train machine learning models and generate key performance metrics. Communicated insights and technical findings through detailed presentations, driving actionable business decisions. Demonstrated strong analytical skills and a data-driven approach to solving real-world problems.

Fundraising Intern

TopTrove Foundation

Nov '23 — Dec '23

• Assisted in planning and executing fundraising campaigns, contributing to the foundation's financial growth. Engaged with donors and partners to cultivate relationships and secure necessary funding. Developed compelling reports and presentations to highlight the organization's impact and success stories. Coordinated event logistics and outreach activities, ensuring smooth and effective execution.

Team Leader

Sep '19 — Jan '20

Organ Donation Awareness Program, Mohan foundation

New Delhi, India

Led a team in planning and executing an awareness campaign to promote organ donation. Coordinated outreach
initiatives, community events, and educational sessions to maximize engagement. Developed strategic communication
plans and promotional materials to boost public awareness. Monitored campaign impact and adapted strategies to
improve participation and overall success.

EDUCATION

Bachelor of Engineering in Software Engineering, University of New South Wales

Sep '25 — Present Sydney, Australia

• Incoming student for Bachelor of Engineering (Honours) in Software Engineering, focusing on specialized coursework in Software Development, Artificial Intelligence, Data Structures, Algorithms, Human-Computer Interaction, and Cloud Computing.

Bachelor of Engineering in Computer Science, Manipal Academy of Higher Education (GPA: 3.04/4.0) Aug '23 — Mar '25 Manipal, India

- Pursued specialization in Artificial Intelligence and Machine Learning during the second year, completing advanced coursework in Machine Learning, Data Analytics with Python, Database Management Systems, Algorithms, and Deep Learning.
- Served as **Head of Software Development** for the student-led **Enigma AI & ML Club**, coordinating technical workshops, mentoring juniors, and promoting collaborative projects.
- Conducted research under faculty supervision, successfully publishing a paper on **predictive modeling for Heart Disease Detection**, applying innovative feature engineering and ensemble ML models.

High School Diploma in High School Diploma, Sachdeva Global School

2023 — Jan '23 New Delhi, India

- Completed rigorous coursework in **Physics, Chemistry, Mathematics, and Computer Science**, building a foundational understanding for higher education in Software Engineering.
- Actively participated in 3D Designing, Computer Science, Mathsand Arduino Automation Clubs, successfully
 delivering projects such as a classroom automation system, demonstrating early proficiency in hardware-software
 integration, programming, and problem-solving.

HONORS AND AWARDS

WARTEX #7.0

Achieved 3rd position by demonstrating advanced technical skills and innovative problem-solving in a competitive setting.

IECSE Freshers' Codesprint 2023

Secured a Top 10 finish, showcasing strong coding proficiency and the ability to tackle complex algorithmic challenges.

IEEE-SBM WiE Codathon'23

Ranked in the Top 10, reflecting technical expertise and creative problem-solving in a fast-paced coding environment.

PROJECTS

Local-LLM Kit Link

Created an OpenAI-compatible REST & Streaming API for local Large Language Models, adding function-calling,
JSON-mode, and log-prob support; distributed as a PyPI package with Docker & GitHubActions CI/CD, enabling
drop-in replacement of cloud LLMs for on-prem deployments.

Model-Compression Pipeline Link

• Engineered an end-to-end framework for **pruning, quantization, knowledge-distillation, and lottery-ticket searches**, shrinking SOTA models **up to 75** % and **doubling inference speed** on edge GPUs while preserving accuracy; includes modular config system, benchmarking suite, and results dashboard

Dynamic-NeRF Link

• Implemented **Dynamic Neural Radiance Fields** with temporal encoding and spatio-temporal attention to render novel views of moving scenes; provides full training, data-prep, and rendering pipelines and supports custom Blender/real-world video datasets.

Continual-Learning System Link

Built a research platform for lifelong learning, integrating EWC, Experience Replay, and
 Learning-without-Forgetting, offers experiment orchestration, forgetting-metric visualizations, and reusable modules
 for sequential task benchmarks..

iStockz Trading Platform

• Designed a beginner-friendly **paper-trading web app** with live portfolio tracking and analytics, modular MVC code, secure auth, and REST hooks for real-time price feeds (via yfinance)..

SKILLS

Programming Languages Python (Programming Language), C++ (Programming Language), Java, Assembly language
 Machine Learning Techniques Artificial Intelligence, Machine Learning, Deep Learning, Artificial Neural Networks,
 Recurrent Neural Network, Convolution neural network, Large language Models, LSTM, Transformer, GRU
 Data Management Data Analysis, SQL Databases, PostgreSQL, MySQL
 Web Development Cascading Style Sheets (CSS), HTML, Node.Js

Automation and Tools Arduino, Automation

Languages Hindi, English