

Tarun Kumar

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Nainital, India

SUMMARY

Backend-focused Computer Science undergraduate (AI & ML) with hands-on experience building workflow automation systems and data-intensive applications using C#, .NET Core, and SQL Server. Skilled in designing scalable backend architectures, optimizing data pipelines, and implementing efficient system workflows. Actively developing expertise in data structures, algorithms, and system design, with a focus on solving large-scale engineering problems.

TECHNICAL SKILLS

Languages: C# , C++, Python, JavaScript, SQL

Frameworks & Libraries: .NET Core, ASP.NET MVC, Bootstrap, OpenCV, Streamlit

Databases: SQL Server (SSMS), SQLite

Tools & Platforms: Git, GitHub, REST APIs

Concepts: Object-Oriented Programming, Debugging, System Design, Data Structures & Algorithms, Agile/Sprint Development, Integration Testing

WORK EXPERIENCE

Mend Solutions

Nainital, India

Software / Application Developer Intern

May 2025 – Present

- Architected and implemented a **7-stage automated commission workflow system** using **.NET Core** and SQL stored procedures, streamlining end-to-end insurance claim processing.
- Engineered a backend module for **long-running Excel report generation** with real-time progress tracking and multi-state validation, reducing manual reporting overhead.
- Wrote **optimized SQL queries and stored procedures** to enforce business rules and improve data consistency across high-volume transactional workflows.
- Executed functional and integration testing cycles to validate business logic, catching edge cases pre-deployment and maintaining data accuracy across modules.
- Collaborated in **sprint-based Agile development**, contributing to requirement analysis, task estimation, and on-time feature delivery.

PROJECTS

Medical Image Analysis with AI | *Python, PyTorch, Streamlit*

2026

- Built an **end-to-end medical image analysis prototype** for binary classification (normal vs abnormal) on grayscale X-ray/MRI scans using a custom 4-block CNN architecture in PyTorch.
- Designed the training pipeline with augmentation, class balancing, and early stopping, **achieving 95%** validation accuracy.

OMR Evaluator | *Python, OpenCV, Streamlit*

2025

- Built an automated **Optical Mark Recognition (OMR)** system to detect and evaluate responses from scanned answer sheets with high accuracy.
- Applied advanced image preprocessing — grayscale conversion, adaptive thresholding, and contour detection — to maintain recognition reliability under variable scan conditions.
- Designed a **dynamic scoring engine** that calculates results based on configurable response patterns, supporting multiple exam formats.

EDUCATION

Mind Power University

Bohrakoon, India

B.Tech in Computer Science – Artificial Intelligence & Machine Learning

2024 – Present

Rajeev Gandhi Navodaya Vidyalaya

Kotabagh, India

Intermediate (Class XII) | Percentage: 77.7%

2023 – 2024