

# Roshan Kumar Singh

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## Summary

AI Full Stack Developer with strong backend expertise in Python, FastAPI, Pydantic, MongoDB, PostgreSQL, and RESTful APIs. Selected for Amazon ML Summer School 2025 (Top 5% out of 60,000+ applicants). Strong problem-solving ability demonstrated through a Global Contest Rank 32 on CodeChef (3-star, Max Rating 1634). Proven track record in building AI-powered platforms, optimizing database-driven applications, and delivering impactful, production-ready solutions.

## Skills

- **Programming Languages:** C, C++, Python, Java, JavaScript
- **AI & ML:** LLMs, TensorFlow, Keras, PyTorch, Scikit-learn, Hugging Face, LangChain, langGraph, NLP
- **Backends:** FastAPI(Python), Pydantic, Redis, GraphQL, RESTful API Design
- **Web Technologies:** HTML, CSS, JavaScript, Node.js, React
- **Databases:** MySQL, MongoDB, PostgreSQL, ChromaDB, Faiss
- **Tools & Platforms:** Git, Docker, VMware, Linux, AWS

## Education

- **Kalinga Institute of Industrial Technology (KIIT)** **Bhubaneswar, India**  
Bachelor of Technology in Computer Science and Engineering 2022 – 2026  
– CGPA: 8.7/10

## Experience

- **Trainee** **August 2025 – Present**  
*Amazon ML Summer School 2025*
  - Selected from a competitive pool of over 60,000 applicants (top 5% acceptance rate) to participate in an intensive 8-module program focused on foundational and advanced machine learning concepts, led by Amazon scientists.
  - Mastered foundational and advanced concepts including Supervised Learning, Deep Neural Networks, Dimensionality Reduction, Unsupervised Learning, Sequential Learning, Reinforcement Learning, Generative AI, and Causal Inference.

## Projects

- **VeriStream – AI-Powered Content Analysis Platform** [ Demo | GitHub ]  
*Real-time misinformation detection system for live broadcasts and URLs.*
  - Architected a full-stack platform capable of analyzing streaming data to detect misinformation in under 500ms.
  - Integrated Whisper for high-accuracy speech-to-text and deployed LLaMA 3.3 to perform multilingual content analysis across 20+ languages.
  - Achieved **95% detection accuracy** using Google Safe Browsing and NLP pipelines.
- **InsightGenei.ai – Natural Language to SQL Query System** [ Demo | GitHub ]  
*AI interface for querying sales analytics using conversational language.*
  - Developed a conversational AI that translates complex, multi-step natural language questions into executable SQL queries for business analytics.
  - Used LangChain and LLaMA for accurate parsing and Groq API for high-speed inference.
  - Attained **90% translation accuracy** across 50+ user queries in real-world scenarios.

## Achievements

- **Competitive Programming:**
  - Achieved a Global Rank of **32** in CodeChef Starters 201.
  - Rated a 3-star coder on CodeChef with a maximum rating of 1634.
- **Smart India Hackathon:** Secured a **Top 10 position** among 400+ teams for building an AI-powered career guidance platform.
- **Research:** Co-authored a paper on a machine learning-based medicine recommendation system (currently under review).