

# Rohit Krishnan

AI/ML Engineer

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## Profile

A dynamic Software Engineer and ML enthusiast pursuing an MSc in Artificial Intelligence at the University of Surrey. Specialised in various web technologies and machine learning, I excel in tackling complex challenges and delivering innovative solutions. Known for rapid technology adoption, effective project application, and strong team collaboration, I continuously seek to enhance my skills.

## Experience

Oct 2023 – **Part-Time Research Assistant**, *University of Cambridge*, UK.

- Present
  - Contributing to Digital Manufacturing & Infrastructure Digital Twins projects.
  - Developed a sample tracking solution for a histopathology lab using OpenCV and YOLOv8 for label visibility and OCR for information extraction.
  - Optimized and packaged ML models for deployment on low compute microcontrollers.
  - Worked on building a Digital Twin platform for orchestrating federated simulation and analytics modules helping researchers to quickly develop and iterate on their ideas.

May 2022 – **Senior Software Engineer**, *Tiatech Health Technologies*, India.

- Jul 2023
  - Transformed "Tialmage" - a radiology viewer, impressing both company stakeholders and clients with the enhanced product UI/UX, leading to promotion to Senior Software Engineer within 3 months.
  - Developed Python microservices for DICOM imaging and teleconferencing, adopted by over 30 hospitals.
  - Ensured compliance with ONC certification for US markets, effectively meeting the stringent g10 and c1 criteria, solidifying the company's commitment to quality and regulatory standards.

July 2019 – **Summer Intern**, *Jaldee Soft Pvt Ltd*, India.

- August 2019
  - Developed well-tested Java Spring Boot services for an Angular frontend.
  - Utilized Agile methodologies with Jira and embraced Test-Driven Development (TDD) principles.
  - Enhanced software development skills through hands-on experience in real-world projects early in my career.

## Education

2023–Present **MSc Artificial Intelligence**, *University of Surrey*, Guildford.

- Specializing in Computer Vision, Deep Learning, and NLP.
- Strong understanding of machine learning fundamentals and AI ethics.

2018–2022 **Bachelor of Technology in Computer Science**, *Neusoft Institute of Technology*, Guangdong.

- GPA: 3.94, ranked among the top performers for the 2022 batch
- Thesis: Serverless e-commerce platform for cost-effective small-scale business operations.
- Notable course results:
  - Fundamentals of Programming (Java): 100%
  - Data Structures and Algorithms: 92%

## Projects

Title **Understanding HUMAN-HUMAN Interactions for Generating Motion from Text**

Description Training energy-based models to learn from videos and understand human-human interactions. Focused on generating realistic human motion sequences from textual descriptions using unsupervised learning. Applications include enhancing character animations, improving human-robot interactions, and creating immersive VR experiences.

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## Projects

Title **Digital Twin Orchestration Platform**

Description Developed a platform to enable researchers to compose and federate simulation models. Key components include:

- An orchestrator leveraging the Kubernetes API to queue simulation runs, manage dependency flows, and enable parallel execution.
- Kubernetes Custom Resource Definitions to abstract implementation details and provide intuitive configuration options for researchers.

Title **Digital Manufacturing on a Shoestring**

Description Gained hands-on experience at the University of Cambridge by deploying modularized components of the Shoestring architecture. Demonstrated expertise in IOT, Docker and Python scripting for streamlined and low-cost digital manufacturing implementations deployed for SMEs across the UK.

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## Skills

Languages Python, Java, JavaScript/TS, Rust, C, Scala, PHP

μ Controllers ESP32-S2, RP2040, nRF54, STM32 series

Frameworks PyTorch, React.js, FastAPI, Spring boot

Databases PostgreSQL, Redis stack, MongoDB, MySQL

Cloud/Tools AWS, Docker, Kubernetes, Git/Gitlab (automation and versioning), JIRA

Soft Skills

- Quick to blend into teams and contribute effectively.
- Hardworking with a strong commitment to project success.
- Excellent communication skills for clear and effective collaboration.
- Proficient at identifying business requirements and breaking them down into manageable tasks.
- Passionate about learning and research, with a keen ability to grasp new concepts and technologies quickly.

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## Honor and Awards

2022 Excellent Graduate Award for academic and athletics performance during my bachelors.

2018 Ranked first in 12th Grade Computer Science 98%

2017 Voted as the School Agni House Captain. Played a major role in orchestrating team activities and fostering a competitive and collaborative environment among students.

2016 Ranked first in 10th Grade Computer Science 99% and French

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## Languages

English: Native or Bilingual proficiency

Hindi: Native or Bilingual proficiency

Japanese: Beginner proficiency

Mandarin: Beginner proficiency