

# ANKUR KOHLI

## SOFTWARE ENGINEER



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ANKUR KOHLI - PORTFOLIO

*Aspiring Software Engineer with a strong foundation in Python, C/C++, Dart, Flutter, Java, Bash, JavaScript, API driven client server development, & advanced technologies.*

## ABOUT ME

Proactive Software Engineer with expertise in frontend development and robust, API driven backend client server systems. Experienced in building scalable architectures with reliable integration and realtime execution. With a strong foundation in AI, native frontend, and backend systems, I excel at problem solving, delivering high performance, and cutting edge solutions. Passionate about collaborative development, continuous improvement, and advancing project success through maintainable code, and software principles.

## PROFESSIONAL EXPERIENCE

### • Software Engineer

April 2025 - October 2025

NTT DATA Italia

Italy

- Developed and managed cross platform Flutter frontends with a UI/UX focus and realtime, multithreaded backends, ensuring secure, low latency communication for intelligent systems.
- Led the development and deployment of an autonomous NAV2 SLAM pipeline using Dockerized ROS2, CI/CD, and tested on a real robot for hardware agnostic scalability.
- Enhanced system reliability through structured integration testing, validation, and debugging workflows using GitLab CI/CD, which reduced post deployment errors.
- Drove agile cross team collaboration through technical documentation, architectural design, and specifications, turning research concepts into deployable, high performance systems.

### • Thesis Project

June 2023 - February 2024

NTT DATA Italia

Italy

- Researched and developed realtime, multithreaded architectures to improve robotic system efficiency by 30%, optimizing inter process communication and latency.
- Built and deployed SLAM based mapping and navigation pipelines in Dockerized ROS2 with CI/CD workflows, enabling hardware independent scalability and reducing deployment time by 25%.
- Tested, validated, and debugged software using GitLab CI/CD, increasing system reliability and uptime by 20%.
- Authored comprehensive technical documentation, improving team productivity and maintainability across projects.

## PROFESSIONAL SKILLS

### TECHNICAL SKILLS

#### Programming Languages:

Python, C/C++, Java, Dart, HTML5, CSS3, Bootstrap, Bash, JavaScript

#### Libraries:

OpenCV, PyTorch, TensorFlow, OpenAI

#### APIs:

JSON, WebSocket Services, REST, RESTful

#### Software & Tools:

Ubuntu/Linux, Docker, Git/GitLab, Flutter, CI/CD Pipelines, VS Code

### SOFT SKILLS

#### Leadership & Planning:

Strategic Planner, Project Management, Mentoring

#### Innovation & Problem-Solving:

Creative Spirit, Concept Development

#### Teamwork & Collaboration:

Conflict Resolution, Reliable Organized

## CERTIFICATIONS

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- **Microsoft:** [Azure Fundamentals](#) November 2025
- **Google Cloud Skills Boost:** [Responsible AI: Applying AI Principles with Google Cloud](#) January 2025
- **Google Cloud Skills Boost:** [Introduction to Responsible AI](#) January 2025
- **Google Cloud:** [Innovating with Google Cloud AI](#) December 2024
- **Google Cloud Skills Boost:** [Introduction to Generative AI](#) October 2024
- **Amazon Web Services (AWS):** [Introduction to Machine Learning: Art of the Possible](#) September 2024
- **Amazon Web Services (AWS):** [Introduction to Robotics on AWS](#) September 2024

## EDUCATION

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- **M.Sc Computer Engineering (Specialization: Robotics Engineering)** September 2021 - March 2024  
*University of Genoa* Italy
- **B.Tech Mechatronics Engineering** July 2016 - June 2020  
*University of Petroleum & Energy Studies* India

## PROJECTS

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- **Frontend Portfolio**
  - **SkyScope Live Weather Dashboard with API Integration:** Built an interactive realtime weather application using JavaScript, Bootstrap, and WeatherAPI, implementing dynamic UI rendering, weather based animations, and API driven data workflows to enhance user experience and performance. [🔗]
  - **Interactive Game using JavaScript:** This project is a web based Rock-Paper-Scissors game that features dynamic gameplay, intuitive design, and a responsive layout, where complete JavaScript logic for user choices, game rules, and automated scoring has been implemented. [🔗]
- **Artificial Intelligence Portfolio**
  - **Automated Warehouse Scenario Using PDDL 2.1:** This project aims to create an AI planning warehouse optimization system that enhances order management, storage efficiency, and logistics through advanced planning, priority queues, plan graphs, and realtime analytics. [🔗]
  - **Task and Motion Planning for Robotics in Coffee Shop Scenario:** The goal of this project is to integrate task and motion planning for robotic navigation using PDDL based planners, state space graphs, BFS, heuristic search, and Euclidean distance computation. [🔗]
- **Machine Learning Portfolio**
  - **Cervical Cancer Detection using CNNs and VGG16 Module - TensorFlow:** The objective is to deploy Deep learning based cervical cancer detection using VGG16 Convolutional Neural Network (CNNs) in TensorFlow with comprehensive preprocessing, training, and evaluation. [🔗]
  - **Convolutional Neural Networks (CNNs) to Process an Image - PyTorch:** The goal of this experiment is to implement Convolutional Neural Networks (CNNs) in Jupyter/Python using PyTorch for efficient image processing and analysis with deep learning techniques. [🔗]
- **Robotics Portfolio**
  - **Software Architecture for Mobile Robot Control:** This assignment involves developing a software architecture for controlling a ROS based mobile robot by applying graph based routing, Dijkstra's algorithm, and Python implemented controller/UI nodes. [🔗]

## HOBBIES

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- Photography
- Hiking
- Chess
- Cricket
- Traveling
- Driving

## REFEREE

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**Claudia Lunini**  
Lead of Smart Robotics, NTT DATA Innovation Center  
NTT DATA Italia S.p.A  
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Relationship: Advisor

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Relationship: Supervisor