

# VIBHAV INNA KEDEGE

MSc Embedded Systems (Honours), BSc Electrical Engineering

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📍 Rotterdam, The Netherlands

- Date of Birth: 27th July 1995
- Nationality: Dutch (Netherlands, EU) & Indian (OCI)



## PROFESSIONAL EXPERIENCE

Alfen N.V.

DevOps Software Engineer | R&D Department

📅 Oct 2023--Ongoing    📍 Almere, The Netherlands

- Designing software systems for Hardware-in-the-Loop (HIL) automated testing of Electric Vehicle charging stations using **Python** (Flask API), Jenkins, Docker, Linux servers, and Azure.
- Building data-driven software solutions for real-time test automation analytics using **Python** (FastAPI), PostgreSQL, Grafana, Docker, and Nginx.
- The Impact - Implementing CI/CD pipelines that run and monitor over 2,000 automated HIL tests daily, reducing software delivery time from 12 weeks to 2 weeks.

KPN (via Capgemini)

Big Data Analyst | In-Home Device analytics team

📅 Oct 2021--Sep 2023    📍 The Hague, The Netherlands

- Contributed to the development of scalable data pipelines to monitor and analyze KPN internet devices across the Netherlands using Spark, Scala, **Python**, and Tableau.
- Implemented a machine learning system to predict customer satisfaction from real-time health metrics of KPN's network devices, using Spark MLlib and Random Forest algorithms.
- The Impact - Analyzed data from 1 billion KPN internet devices across the Netherlands, enabling proactive Internet quality management and reducing customer churn rate.

Almende B.V.

Robotics Researcher | R&D Department

📅 Jun 2020--Aug 2021    📍 Rotterdam, The Netherlands

- Designed distributed planning algorithms for multi-robot teams performing Simultaneous Localization and Mapping (SLAM) using **Python**, C++, and ROS. (Project Link)
- The Impact - Contributed to research on multi-robot planning and co-authored a publication presenting findings from a specific case study. (Link)

Alstom Transport

System Engineer - Train Networks | Train Control Department

📅 Jul 2017--Jul 2019    📍 Bangalore, India and Sydney, Australia

- Collaborated on the design of Ethernet-based Train Control and Monitoring Systems (TCMS) for autonomous trains and performed functional testing of train control software on operational metro lines in India and Australia.
- The Impact - Achieved a 90% network functionality pass rate, completing validation 3 months ahead of schedule.

## PERSONAL STATEMENT

"A Proactive professional with 5+ years of experience in Software Design & Architecture, Data Analysis, and Artificial Intelligence. Enthusiastic about collaborating with Agile teams to leverage data in solving complex global challenges."

## EDUCATION

Delft University of Technology

MSc Embedded Systems (Honours)

📅 2019 - 2021    📍 Delft, Netherlands

- Specialisation - Artificial Intelligence (AI) and Robotics.
- Thesis - "Multi Robot Exploration and Planning in limited communication environments" (Link).
- Published at ICAART 2022 (Link).

National Institute of Technology  
Karnataka (NITK-Surathkal)

Bachelor of Technology, Electrical and  
Electronics Engineering

📅 2013 - 2017    📍 Mangalore, India

- Specialisation - Embedded Software
- Thesis - "Multiple Interface Automation using Distributed Embedded Devices" (Link)

## TECHNICAL SKILLS

Python	●●●●●●
Software System Design	●●●●●●
Machine Learning & AI	●●●●●●
Linux Systems	●●●●●●
CI/CD Tools (Jenkins, Docker)	●●●●●●

## CERTIFICATIONS

- Software Product Management (Ongoing)
- Advanced Python Development Techniques (LINK)
- Google Advanced Data Analytics Specialization (LINK)
- DeepLearning.AI TensorFlow Developer Specialization (LINK)
- Professional Scrum Master I (LINK)

## RELEVANT PROJECTS

### Stock Monitor App

#### Self Learning Project

📅 Jan 2025–Present

- Designed a lightweight cloud application to monitor and predict stock prices of S&P 500 companies using **Python** and Docker. (LINK)
- The Impact - Enables users to visualize closing prices, perform correlation analyses, and track yearly changes of selected stocks.

### LLM QnA Application

#### Self Learning Project

📅 Jul 2025-Jul 2025

- Developed a context aware, interactive command line LLM tool using **Python**, LangChain, Ollama, and a vector database. (LINK)
- Impact – Enables users to obtain context-specific answers to their questions using a Retrieval-Augmented Generation (RAG) approach.

### MLOps for Image Segmentation

#### Freelance Project

📅 Apr 2023 - Jul 2023

📍 Delft, Netherlands

- Designed an MLOps software solution for automated training of computer vision models, including object detection (Yolov8) and image segmentation models (SAM) using **Python**.
- The Impact - Enabled a startup (XOSight BV) to perform daily training of computer vision models on a dataset exceeding 100,000 images.

### Reinforcement Learning Sensitivity Analysis

#### Academic Project

📅 Sep 2020

📍 Delft, Netherlands

- Implemented Reinforcement Learning algorithms (SARSA and Q-Learning) on OpenAI Gym environments.
- Conducted performance comparisons by tuning hyperparameters to optimize algorithm efficiency
- Project Link: (LINK)

## EXTRA-CURRICULARS

- Regular half marathon runner (5+ events) (LINK)
- Landscape photography enthusiast (LINK)
- Drone photography creator (LINK)
- Rhythm guitar basics (LINK)
- Blog writer on Medium (LINK)
- Awarded the Visionary Engineer award at Alstom Transport for excellence in planning and scheduling
- Head of the Indian Society for Technical Education (ISTE-NITK) technical student club during Bachelor's studies
- Volunteered regularly to support underprivileged students in Indian government schools during Bachelor's studies

## MANAGERIAL SKILLS

Project Planning

Collaboration

Customer Interaction

Agile Working

Scrum

Mentoring and Training

## KNOWN LANGUAGES

English

Dutch (A2)

German (A1)

Hindi

Kannada

## HOBBIES

Running

Tennis

Cycling

Photography

Learning Languages

Guitar