



# Nandagopan K

✉ nandagopan.k01@gmail.com ☎ +91-7736322505 🌐 zorx01  LinkedIn  website

---

## EDUCATION

---

### University of Calicut

Jun 2019 – Apr 2022

#### *B.com Finance*

- Collaborated with cross-functional teams from various college departments to effectively
- Presented an article on "The impact of covid-19 on the banking sector".
- Worked on a graduation project and executed project strategy.

---

## PROFESSIONAL EXPERIENCE

---

### IIT Palakkad

Mar 2024 – present

#### *Project Engineer*

Palakkad, Kerala

Project: Reinforcement learning-based control algorithms on dynamical systems/ on a network of systems, simulations, and experimental validations.

- Implementation of reinforcement learning algorithms in hardware using **MATLAB** and **Simulink**.
- Implementation and testing of latest neural network architecture (**KAN**) and developing its variants.
- Migration of **MLP** based neural networks to **KAN**.

### Indian Institute of Technology Palakkad (IIT)

Jun 2023 – Mar 2024

#### *Project Engineer*

Palakkad, Kerala

Project: Reinforcement learning-based control algorithms on dynamical systems/ on a network of systems, simulations, and experimental validations.

- Improving and Implementing **Deep Reinforcement Learning** algorithms in Gazebo-simulated environments using **PyTorch** and **ROS**.
- Implementation of optimal control algorithms in hardware.
- Migration of **ROS 1** code to **ROS 2**.

### Luminar Technolab

Nov 2022 – May 2023

#### *Data science Trainee (Internship)*

Kochi, Kerala

- Collecting, cleaning, and preprocessing data.
- Exploring and analysing data using statistical methods and tools.
- Building predictive models and algorithms to solve specific business problems.
- Communicating insights and results to stakeholders through visualisations, presentations, and reports.
- Statistical analysis, quantitative analytics, forecasting/predictive analytics.

---

## SKILLS

---

- Machine Learning
- Matlab
- Huggingface
- Linux
- Flask
- Deep Learning
- PyTorch
- ROS
- Tableau
- Version control (Git)
- Python
- NLP
- Gazebo
- SQL

---

## PROJECTS

---

### Mobile Robot Auto-Navigation

**Deep reinforcement learning** algorithms were implemented on a **turtlebot3** for **autonomous navigation and obstacle avoidance**.

**Gazebo/ROS**

### LQR Control on Two wheeled self balancing robot

An **Linear Quadratic Regulation (LQR)** controller was implemented to stabilize a self balancing robot. It was implemented in a simulated environment(**Gazebo**) and **ROS** was used to communicate with the robot.

### Deep Reinforcement Learning for Control Systems

- Implemented state-of-the-art (**SOTA**) **Deep Reinforcement Learning** algorithms in the Gymnasium Classic Control environment and 3D environments.
- Bench-marking the results.

### Review Sentiment Analysis [↗](#)

This is an Amazon review sentiment analysis web app that is built using the **Streamlit** framework and the **VADER** (Valence Aware Dictionary and sEntiment Reasoner) model. Once the text has been analyzed, the application outputs the sentiment of the review as either positive, negative, or neutral.

### SpamClass [↗](#)

This **Flask**-based web app uses **NLP** techniques and a pre-trained Naive-Bayes model to classify messages as spam or non-spam.