# Sachin Bahuleyan

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## Education

**Indian Institute of Technology Mandi** Aug 2022 - May 2024
*M.Tech Computer Science* *Current CGPA: 8.12*

**Dronacharya College of Engineering** Aug 2014 - May 2018
*B.Tech Mechanical Engineering* *Percentage: 64.2%*

## Major Project

**Reinforced Bot Behavior** | *Unity 3D, C#, Logitech G29 Driving Wheel, VS Code* Ongoing

- Designed and implemented a realistic driving environment within Unity.
- Established seamless integration between the Logitech G29 Driving Wheel and Unity for enhanced agent control.
- Leaveraged State-of-the-art Reinforcement learning Proximal Policy Optimization and Imitation Algorithms: Behavior Cloning and Generative Adversarial Imitation Learning
- Effectively trained the agent in a dynamic multi-agent environment, preparing it for complex real-world interactions.

## Projects

**End to End Student Performance Predictor** | *Python, Flask* March. 2024

- Conducted comprehensive Exploratory Data Analysis (EDA) to understand data distribution, identify outliers, and studied relationships between features.
- Developed an end-to-end machine learning project for predicting student performance with data pipeline, exception handling and logging.
- Trained multiple models including linear regression, random forest, Decision Trees and XGBoost. Achieved an R-squared score of 87% on the held-out testing set. Built a web application for the project using Flask.

**Airbnb New User Booking** | *Python* March. 2024

- Predicting where a new user will book their first travel experience. Using this Airbnb can share more personalized content with their community, decrease the average time to first booking, and better forecast demand.
- Conducted comprehensive Exploratory Data Analysis (EDA) to understand data distribution, identify outliers, and studied relationships between features.
- Trained multiple models including random forest, Decision Trees and XGBoost.
- Achieved a public score of 0.86 on KAGGLE.

**Weed-Crop Semantic Segmentation Using U-Net** | *Pytorch, Python* Dec. 2022

- Developed and trained a custom U-Net model for semantic segmentation of weeds and crops in UAV imagery
- Leveraged deep learning to address the challenge of weed detection in UAV images for precision agriculture.
- Utilized PyTorch for model development
- Dataset: UAV Weed-Crop images.

## Skills

**Languages and Frameworks**: C++, Python, SQL, Pytorch, JavaScript, HTML/CSS, LaTeX
**Tools**: Git/GitHub, VS Code

## Coursework

Deep Learning, Advanced Data Structures & Algorithms, Linear Algebra, Probability, Statitical Methods

## Achievments

**GATE CSE 2020: Achieved Rank 2652 among 100000 candidates**