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**PROFESSIONAL EXPERIENCE**

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**Google Summer of Code (GSoC)***May 2021 - Present**JdeRobot - Universidad Rey Juan Carlos*

- Created **RADI-3.1** (RoboticsAcademy Docker Image) for ROS1-Noetic and VNC-based web template with hardware acceleration support using TurboVNC and VirtualGL.
- Extended RoboticsAcademy drone exercises to web-based template and migrated all the exercises of RADI from ROS1-Melodic to ROS1-Noetic.
- Building the **automatic evaluator feature** to let users compare their algorithms based on Plotly.js
- **Added connection protocols** to sequentially launch the drone exercises which improved the robustness of the platform.
- Built the **on-demand log feature** to ease debugging.
- Link to the GSoC-blog

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**PROJECTS**

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**Foldable Motorcycle Helmet Design***Feb 2021 - July 2021*

- Developed a virtual prototype of a **Foldable Motorcycle Helmet** based on **SolidWorks**.
- It was used as an input to the finite element analysis based on **Ansys**.
- **Selected amongst the top 4 projects** and showcased in the webinar organized by La Fondation Dassault Systèmes.

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**AI Learns to Park***Jan 2021 - Feb 2021*

- Developed a Self-improving car parking game based on **Unity 3D**, **C#**, **Python**, and **PyTorch**.
- The simulation was connected to a **Python** controller over TCP.
- It is compatible with both single and multi(asynchronous) agents.
- Implemented different **Reinforcement Learning algorithms** like DQN, Rainbow-IQN.

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**Split and Rephrase model***Feb 2021*

- Developed a **Natural Language Processing(NLP) model** that can break long English sentence into multiple sentences based on **NLTK** and **Python**.
- **Freelance job at atalki.com** to improve the performance of the main NLP model by fine-tuning the input.

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**Drone Mapping***May 2021 - Present*

- Developed a GUI application based on **Python Qt5** and configured it to rospy.
- Created the drone controller to implement 3D-Mapping & Navigation.

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**SKILLS**

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**Programming Skills:** Python, C++, Bash  
**Softwares:** SolidWorks, Matlab, PTC Creo

**Frameworks:** Git, ROS, Docker, OpenCV, PyTorch  
**Operating Systems:** Ubuntu(Linux), Windows

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**POSITION OF RESPONSIBILITY**

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**Open Source Developer** at RoboticsAcademy**Maintainer** of RoboticsAcademy drone exercises

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**EDUCATION**

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**Thapar Institute of Engineering and Technology***Bachelor of Technology in Mechanical Engineering**Patiala, India**2018 - 2022 (Expected)*