# Heer Patel

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## EDUCATION

- **The Maharaja Sayajirao University of Baroda** — Gujarat, India
  *Diploma - Computer Engineering; Percentage:* — *August 2019 - June 2022*
  **Courses:** *Operating Systems, Data Structures, Database Management Systems, Artificial Intelligence, Computer Networks, Unix/Linux, Web Development, C, C++, Java*

## SKILLS SUMMARY

- **Languages**: Python, C, C++, Java, SQL, HTML, and CSS
- **Frameworks**: Scikit-Learn, Pandas, Matplotlib, Streamlit, Flask, Jekyll, Rasa, Seaborn, and NumPy
- **Tools**: Docker, GIT, MySQL, SQLite, Jupyter, and VSCode
- **Platforms**: Linux, Web, and Virtual Machines
- **Soft Skills**: Leadership, Writing, Time Management, and Goal Oriented

## ACADEMIC PROJECTS

- **HoneyComb NLU Chatbot** — Python, Matplotlib, Rasa, Pycord
  *Student Developer* — *Jan 2022 - Mar 2022*
  - **Cryptocurrency oriented chatbot**: Collaborated with a team of 3 to create a cryptocurrency oriented chatbot with NLU capabilities hosted on Discord using Pycord framework.
  - **REST API for NLU pipeline**: Created an NLU pipeline as a RESTful API in Rasa framework with efficient, extensive, and modular intent-entity classification, and error handling.
  - **NLU Docker Containers**: Implemented Docker containers for the NLU pipeline to cross-compile and run on ARM64 architecture.

## PERSONAL PROJECTS

- **Covid Vaccinations Analysis and Prediction** — Python, Jupyter, Matplotlib, Scikit-Learn, NumPy
  *Student Developer* — *May 2021*
  - **Preprocessing and Analysis**: Preprocessed and analysed COVID Vaccination data from the dataset provided by Our World In Data.
  - **Data Visualization**: Performed data visualization and implemented Multi-layer Perceptron model for Regression using Scikit-Learn and Matplotlib.
  - **Hyperparameter Tuning**: Implemented hyperparameter tuning and cross-validation to find the best hyperparameter combinations.
- **200iq Calculator** — Python, Kivy
  *Student Developer* — *Oct 2020*
  - **Front-end Widget/Layout Design**: Designed an aesthetic, accessible and complex calculator front-end using widgets and layouts in Kivy along with proper exception handling and popups.
  - **Infix Expression Evaluation Algorithm**: Implemented an algorithm for infix expression evaluation from scratch in Python.
  - **Modular development**: Maintained a modular and clean approach in linking the backend, frontend, and different components.
  - **Executable File**: Created an executable file from Python to open the calculator directly.
- **Personal Website** — Jekyll, HTML, CSS, JavaScript
  *Student Developer* — *Jul 2021 - Present*
  - **Website Composition and Design**: Designed and created a personal website from scratch using Jekyll, HTML, and CSS.
  - **Efficient Templates and Layouts**: Created an about page, posts page, and repositories page using a modular and efficient approach by creating common templates and layouts.
  - **Modular Approach**: Implemented different layouts and templates such as navigation bar, blog pages, index page and particular CSS files to accompany the particular page.
  - **Aesthetic and Sleek Design**: Designed a sleek, aesthetic, and appropriate front-end starting from the component positioning to the fonts and the color palette.
- **Machine Learning Algorithms from Scratch** — Python, Jupyter, Matplotlib, NumPy, Scikit-Learn, Seaborn, Pandas
  *Student Developer* — *Feb 2022 - Present*
  - **Linear and Logistic Regression**: Implemented widely used algorithms like Logistic Regression and Linear Regression from scratch using NumPy.
  - **Data Visualization**: Performed data visualization on the model and the data to observe the structure of the dataset.
  - **Regularization**: Added different techniques such as vectorization, regularization, and various loss metrics.
  - **Modular Design**: Designed modular and usable classes for each algorithm.