RUSHIRAJ GADHVI

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PLAKSHA UNIVERSITY
COMPUTER SCIENCE & ARTIFICIAL INTELLIGENCE

SKILL

Python (PyTorch, scikit-learn, pandas, numpy, matplotlib, tkinter, seaborn, opencv) | **MATLAB** | **C++** | **Dart** | **HTML** **CSS** | **JavaScript** | Frameworks: **Flutter, Flask, Django**

Hardware: Microcontroller Programming, Electronics Prototyping, PCB Designing, Debugging Circuits
general: Bash Scripting, Github, InkScape, MSOffice

EXPERIENCE

International Thermonuclear Experimental Reactor (ITER), India | *Research Intern* ***Present***

- Creation of a package suite for **plasma emission modeling** in XRCS-Edge, an observation spectrometer for the ITER Fusion Project. ITER is the world's largest fusion experiment; 35 nations involved in building most complex machine ever.
- Gained experience in **collaboration within a large team**, conducting **data analysis**, and engaging in **simulation** work.

Physical Research Laboratory (PRL), Ahmedabad | *Research Intern* ***June, 2023 - July, 2023***

- Conducted precise **fine-tuning of model and composition analysis** of spectral data using **statistical techniques**.
- Designed and implemented a Python-based spectrum **visualization platform** to make the analysis process quicker.
- Gained expertise in **research methodology**, meticulous data collection, and thorough **data analysis**, emphasizing strong attention to detail.

Global Admission Committee - UN Millennium Fellowship | *Admission Team* ***May, 2023 - August, 2023***

- Evaluated applications and projects for the annual **United Nations Millennium Fellowship Program**.
- Reviewed and **assessed 31 projects** across **4 different regions**. Developed strong teamwork and collaboration skills.

Design Freelancer ***Nov, 2020 - August, 2023***

- Completed over **90+ design projects** for a diverse **global client base**, showcasing versatility and adaptability.
- Gained expertise in communication, negotiation tactics, and consistently meeting project delivery commitments.

MADIEE | *Game Designer* ***Jan, 2022 - April, 2022***

- Crafted impactful game mechanics that **improved employee performance** for client companies by leveraging a deep understanding of human response dynamics and gamification principles.
- Gained valuable insights into the significance of User Experience (UX) in **product design** and the principles of **Behavioral Psychology**.

SCHOLASTIC ACHIEVMENTS

- **AWS AI & ML Scholar 2023** | One amongst **2,000 selected globally**, out of **70,000+** applications
- **UN Millennium Fellowship 2022** | One amongst **3,000 selected globally**, out of **31,000+** applications
- **1st rank** amongst **190+** teams at **IIT Bombay E-Cell** BnB (Bid and Build) Event - 2022
- Selected 'Emergency Vehicle Priority System' by **Student Startup and Innovation Policy (SSIP), Gujarat** amongst **200+** projects - 2020
- Accepted in Zoho School of Technology (Chennai) -2021| Amongst **85+** selected, out of **10,000+** applied
- Pitched at **International Conference ICOSTART'19** (International Research Conference on Innovations, Startups and Investments)
- **First Position** amongst **200+** teams in Science Modeling at **IPR (Institute of Plasma Research)** - 2019

PROJECT CONTRIBUTION

Therapia - parkinson analysis app *(Flutter, Flask, Python)*
Developed a smartphone application to gather **vibration information** from individuals with Parkinson's disease. Utilized builtin sensors like accelerometer and gyroscope. Employed **Machine Learning to identify patterns in the impact of user medication**. Project having a **potential impact to more than 8.5M+ Patients**. Nominated for prestigious **S.P.Dutt Award**.

ASTROMCMC *(Python)*
Collaborated with **Dr. Arvind Singh Rajpurohit** during an internship at Physical Research Laboratory (PRL) on a project focused on data analysis from the VLT telescope at ESO. Employed **advanced statistical techniques**, specifically the Monte Carlo Markov Chain (MCMC) method, to fine-tune model parameters and identify the **abundance of various metal elements in Red Dwarf Stars**. Currently **in the process of preparing a publication to share the findings and insights gained from this project**.

PAGE2CIRCUIT *(Python, PyTorch, Streamlit)*
Page2Circuit is a project that converts hand-drawn circuit diagrams into meticulously rendered digital schematics. It was developed using **PyTorch and OpenCV and made accessible through Streamlit**. The model underwent training on a comprehensive open-source dataset containing around **14,000 hand-drawn images** of **11 distinct electronic components**. Notably, the model achieved an impressive **validation accuracy of 90.35%**, with room for further improvement.

Volunteering

Volunteered in Astro-Night event held in Ahmedabad, 2017, 2018 and 2019
Volunteered in Vikram Sarabhai Community Science Centre for 2016, 2017