



Vaibhav Raj

Python Developer(Ex-Intern) at Opstree Solutions

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BCA 3rd Year Student | Aspiring Data Scientist & AI/ML Enthusiast

I am a BCA student with a strong interest in Data Science and AI/ML. I have experience working on Python development, AI projects, and web applications. I have also worked as an intern, gaining hands-on experience in Python and Data Science. I am passionate about learning new technologies and solving problems using AI and machine learning.

EXPERIENCE

Python Developer	Opstree Solution	July2024 – October2024
<ul style="list-style-type: none">– Worked in different field like AI/ML, Data Science and in Cloud.– Projects like Infra Creation Automation and Scrapped Data filtration refines by understanding in Model Training and Proficient use of Large Language Model.– Collaborated with the development team to design and implement scalable solutions, including backend services and APIs.– Participated in code reviews and contributed to improving code quality and best practices.– Gained hands-on experience with data science tools and techniques, including data cleaning, analysis, and visualization.		

Tech Stack

- Programming Languages: Python, C++
- Data Science & Machine Learning: Pandas, NumPy, Scikit-Learn
- Web Development: Flask
- Database Management: MySQL
- Cloud Services: AWS
- Version Control: Git, GitHub
- Tools & Libraries: Jupyter Notebook, Matplotlib, Seaborn

Data Analyst Intern	IBM SkillsBuild	July 2024 - August 2024
<ul style="list-style-type: none">– Analyzed educational data to understand the key sources of inequality in access to education in India, focusing on metrics like enrollment rates, dropout rates, literacy rates, and socio-economic factors.– Identified disparities in educational access related to gender, economic status, and geographical location, contributing to insights for policy recommendations.– Applied data science techniques for data cleaning, analysis, and visualization using Python libraries such as Pandas, NumPy, and Matplotlib.– Collaborated with the team to propose actionable solutions, including targeted educational programs, infrastructure improvements, financial support for low-income families, and gender-sensitive policies.– Worked on datasets from sources like Kaggle, government websites, and educational institutions to develop a comprehensive understanding of educational disparities.		

Tech Stack:

- Languages: Python
- Data Analysis: Pandas, NumPy, Matplotlib, Seaborn
- Tools: Google Colab

EDUCATION

BCA (Bachelor of Computer Application)	Banarsidas Chandiwalla Institute of Information Technology (BCIIT) , IPU	2022 - 2025
10 th -12 th Grade	SRSD SR SEC SCHOOL, New Delhi	2019-2022

PROJECTS

AI Commit Risk Analyser
<p>Technologies Used: Python, JavaScript, SonarQube, SonarCloud, LLM, Docker, Django, SpringBoot, MySQL, RestAPI</p> <ul style="list-style-type: none">• Integrated SonarQube and SonarCloud for comprehensive code analysis across 29 programming languages, ensuring consistent quality checks.• Developed a Bug Frequency Server and integrated Large Language Model (LLM) for automated code reviews, reducing critical production bugs by 40% and improving review efficiency by 50%.• Created a severity calculator and streamlined SonarCloud setup with Git, improving issue prioritization accuracy by 30% and reducing manual review time by 60%.• Developed a Master Severity Index, increasing code quality gate pass rates by 25% and optimizing documentation for seamless integration.

Key Achievement: Successfully developed a comprehensive code quality platform, significantly enhancing code review efficiency and prioritization accuracy.

Infra Creation Automation

- Works on HLD(High Level Diagram)
- Creates automatically Flowchart Diagram according to selected option by user to create Cloud Architecture
- Gives basic idea to create infrastructure
- User can regenerate it by regenerate option

Automated Waste Segregation System

Technologies Used: Convolutional Neural Networks (CNN), Flask, HTML, CSS, JavaScript

- Designed and implemented an automated system to classify waste into categories like recyclable, organic, and non-recyclable using CNN models.
- Developed a responsive web interface with HTML, CSS, and JavaScript for user interaction.
- Integrated the machine learning model with a Flask backend to provide real-time waste classification results.
- Focused on optimizing model performance to achieve high accuracy and scalability.
- Addressed key challenges in waste management and contributed to sustainable environmental practices.

Key Achievement: Successfully developed a prototype with efficient waste classification capabilities, showcasing a scalable solution for smart waste management.

Chat Bot

- Learning the use of Large Language Model
- Creates the chat Bot using gemini api model=1.5 flash
- User can interact with bot and get the answer accordingly

Snake Game

- A classic Snake game built using the Turtle module in Python
- Enhance my programming skills and get hands-on experience with game development.
- From handling user input to creating game logic and designing a simple yet engaging interface
- Implementing game loops and collision detection
- Enhancing problem-solving and debugging skills

Data Analysis

- Works on Dataset like Impact of Excess Rainfall, and Education
- Extract useful insights from data, Descriptive Analysis, Prescriptive Analysis, Visualizing the data

LANGUAGES AND TECHNOLOGIES

- **Languages** - Python, C++
- **Markup languages** - HTML, CSS
- **Frameworks** - Flask
- **Tools** - GitHub, ChatGPT, Prompt Engineering
- **Databases** - MySQL
- **Data Science** - Pandas, Numpy, Scipy, Tensorflow, scikit-learn
- **Analytics** - MS Excel, Matplotlib

ACCOMPLISHMENTS

Certificates

- Supervised Machine Learning: Regression and Classification
- Introduction to Generative AI By Google
- The Complete Python Pro Bootcamp from Udemy
- Kaggle Machine Learning Certificate
- Kaggle Python Learning Certificate
- IBM Data Science Fundamental certificate