**Gurinder Singh Sandhu**

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**Programming languages:** Python (Advance), C# (Intermediate), C++ (Intermediate)

## RESUME OBJECTIVE

Dedicated and highly motivated recent graduate with a passion for Python development, eager to embark on a career as a Python Developer. Possessing a strong foundation in Python programming, web development, and problem-solving, I am committed to leveraging my skills and knowledge to contribute effectively to innovative projects. With a keen interest in staying updated with the latest industry trends and a proven ability to quickly adapt to new technologies, I am ready to collaborate with a dynamic team to create efficient and scalable Python solutions. Seeking an opportunity to learn, grow, and make a meaningful impact in a professional Python development environment.

## WORK EXPERIENCE

While I'm a fresh graduate actively seeking opportunities in Python-related roles, I have gained **valuable experience through my previous positions**:

***Python Developer at CODEAPP TECHNOLOGIES,*** *Punjab, India*

***March 2022 - March 2023***

- Created robust web applications using Django and Flask frameworks, adhering to project specifications and timelines.
- Added new features and functionality to existing applications, ensuring they were user-friendly and met client requirements.
- Wrote and executed unit tests, utilizing Selenium for automated browser testing, which helped in identifying and fixing bugs efficiently.
- Managed and manipulated data using ORM (Object-Relational Mapping) in Django, ensuring seamless data integration and retrieval
- Participated in peer code reviews, ensuring code quality, consistency, and adherence to best practices.
- Document code, and maintained technical documentation to support future development and maintenance.
- Deployed applications to production environments and provided ongoing maintenance and support to ensure their smooth operation.

***Jr. Python Developer at CODEAPP TECHNOLOGIES,*** *Punjab, India*

***Jan 2022 - March 2022***

- Developed clean, efficient, and well-documented Python code.
- Identified and fixed bugs in existing codes, which improved the overall functionality and performance of applications.
- Worked closely with senior developers, designers, and project managers to understand project specifications and implement solutions accordingly.
- Used version control systems like Git to manage code changes, ensuring proper versioning and collaboration among team members.
- Continuously learned about new Python libraries and frameworks, integrating them into projects to enhance functionality and efficiency.
- I occasionally interacted with clients to gather requirements, provide updates, and address any concerns related to projects I was working on.

***Machine Learning Engineer (Internship) at Technofy India,*** *Punjab, India*

***June 2021 – Dec 2021***

- Acquired fundamental knowledge in machine learning algorithms and libraries including NumPy, Pandas, Matplotlib, and Seaborn.
- Developed projects utilizing machine learning techniques for data analysis, visualization, and predictive modeling.
- Gained proficiency in deep learning frameworks such as Keras and TensorFlow, implementing neural networks for various tasks.
- Built and experimented with neural networks using Keras, focusing on dense layers for both classification and regression task.
- Collaborated with peers to tackle complex machine learning challenges, fostering teamwork and problem-solving skills in a professional environment.

## EDUCATION

***Artificial Intelligence***, ***Georgian College (Barrie, ON)*** **Jan 2024 – Present**

***Big Data Analytics, Georgian College (Barrie, ON)*** ***May 2023 – Dec 2023***

Earned a spot on Dean's List (GPA above 80%) for both semesters

***Bachelor of Technology – Computer Science (India)*** ***Apr 2018 – June 2022***

Graduated with distinction, achieving an outstanding overall GPA of 83%.

## SKILLS AND ABILITIES

As a Python developer, I have acquired **a comprehensive set of skills and abilities** that enable me to excel in creating robust and efficient software solutions. Here are some of my key skills and abilities:

- **Proficiency in Python:** I possess a deep understanding of Python programming language, its syntax, and its extensive libraries. My proficiency allows me to write clean, readable, and maintainable code.
- **Web Development:** I am skilled in web development using frameworks like Flask and Django. I can create dynamic and interactive web applications, design RESTful APIs, and work with databases to ensure data integrity and security.
- **Data Manipulation and Analysis**: I have a strong foundation in data manipulation and analysis using libraries such as NumPy and pandas. I can efficiently clean, preprocess, and analyze data, extracting valuable insights.
- **Database Management**: I am experienced in working with various databases, including SQL and NoSQL databases. I can design and optimize database schemas, write complex queries, and ensure data consistency.
- **Testing and Debugging**: I have the ability to write unit tests, perform debugging, and troubleshoot issues systematically, ensuring the reliability and quality of software products.
- **Web Scraping:** I can develop web scraping scripts using libraries like Selenium to extract data from websites, automate tasks, and gather valuable information.
- **API Integration:** I can seamlessly integrate third-party APIs into applications, enabling data exchange and enhancing functionality.
- **Containerization:** I am still learning the art of Containerization technologies like Docker, which will allow me to create portable and scalable application environments.
- **Problem-solving**: I possess strong problem-solving skills and can tackle complex challenges, breaking them down into manageable steps to find

innovative solutions.

- **Documentation:** I understand the importance of clear and comprehensive documentation. I can document code, APIs, and processes to facilitate collaboration and knowledge sharing within the team.
- **Continuous Learning:** I am committed to staying updated with the latest trends and best practices in Python development and technology in general. I actively seek opportunities to expand my skill set.
- **Communication:** I have excellent communication skills, both written and verbal, which enable me to collaborate effectively with cross-functional teams, stakeholders, and clients.

With a passion for coding and a commitment to delivering high-quality software solutions, I am excited to contribute my skills and abilities as a Python developer to drive innovation and achieve project goals.

## PROJECTS

You're welcome to review my GitHub profile, where you can find a number of projects I've created and contributed to.

GitHub profile: https://github.com/Guri-sandhu-codes

1. **ColorDetectionProject**: This is an individual project that I submitted during my graduation in College.

   The ColorDetectionProject incorporates the principles of OpenCV to perform color detection. Within this project, when an object is presented to the camera, it identifies the color of the object and displays it. I've implemented two distinct methods for this purpose:

   - The first method relies on the HSV (Hue, Saturation, Value) values of the color. It employs conditional statements (if-else) to compare these HSV values, ultimately determining the precise color of the object.
   - The second method utilizes the RGB (Red, Green, Blue) approach. Here, I've stored a range of colors in a CSV file, and the program seeks the nearest matching color to the object captured by the webcam. To calculate the similarity, I employ the following formula:

d = abs (R – int (csv.loc[i, "R"])) + abs(G - int(csv.loc[i, "G"])) + abs(B - int(csv.loc[i , "B"]))

This formula computes the absolute differences in the Red, Green, and Blue components between the object's color and the colors stored in the CSV file, enabling the identification of the closest matching color.

2. **recognize-character:** This project served as my final major project during my graduation, and it was designed for character recognition, allowing users to input characters from a broad range, including alphabets (A-Z) and numbers (0-9). I sourced data from two Kaggle datasets to build this project:

    - **Handwritten A-Z Alphabets Dataset:**

      Source: Kaggle - Handwritten A-Z Alphabets

    - **Handwritten Digits from 0-9 Dataset:**

      Source: Yann LeCun's MNIST Database

    I integrated and merged these datasets to create a comprehensive dataset. Subsequently, I employed Convolutional Neural Networks (CNN) to train the model, enabling it to recognize handwritten characters effectively.

The project features two distinct applications:

- **Local Machine Application**: This application runs on a local machine and allows users to input characters for recognition.
- **Heroku Deployment**: Initially, I deployed a version of the project on Heroku, making it accessible to users from anywhere. Unfortunately, due to changes in Heroku's policies, the free deployment service is no longer available, and the website is currently inactive.

3. **Skip-the-dishes-scraper**: This is a recent project I created of web scraping. I've developed a project where I leveraged the power of automation to create a Python program using Selenium. The program efficiently gathers data from a website called "Skipthedishes" (https://lnkd.in/gdqGz_ca ) focusing on restaurants within a specific vicinity. While I've used my own address as an illustrative example, it's worth noting that the program can seamlessly adapt to any location.

4. **News-Classification**: The objective of this project is to develop a machine learning model that can accurately classify news articles into predefined categories such as sports, politics, technology, entertainment, and business. The system aims to automate the categorization process, thereby enhancing the efficiency of news organization, retrieval, and analysis.

## EXTRACURRICULAR

*Volunteered as a Coding Instructor at **Technofy India**, imparting knowledge on the fundamentals of Python programming to young individuals.*