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| | **Name** | **Pankaj Satyawan Munde** | | |
| | **Position:** | Associate – Technology AI/ML | | |
| | **Email/Contact** | pmunde.connect@gmail.com / +917775059660 | | |
| | **Date of Birth** | 12th June 1993 | | |
| | **Education:** | • B.E. (Bachelor of Engineering) in Electronics and Telecommunication Engineering, Sinhagad Institute of Technology, Lonavala [2014-2017]<br>• Diploma in Electronics and Telecommunication Engineering, Udgir [2012-2014] | | |
| **4. Employment Record** | **From** | **To** | **Company** | **Position Held** |
| | Jun 2020 | Till date | Shivrai Technologies Pvt. Ltd. | Associate – Technology AI/ML |
| | Sept 2019 | Mar2020 | Allure Software Pvt Ltd | Software Engineer - ML |
| | Jun 2018 | Sep 2019 | Dzine Arena Pvt. Ltd. | Python Developer |
| **5. Brief Profile** | • With Over 6+ years of Extensive Experience, I have worked on various areas – Deep Learning, Computer Vision (Classification, Detection & Segmentation), Generative AI, Drone and Satellite based imagery, Large Language Models, Natural Language Processing, Rest API's development & deployment.<br>• Have worked in various roles such as – Python Developer, Software Engineer – ML, Associate – Technology AI/ML | | | |
| **8. Countries of Work Experience** | India | | | |
| **9. Languages** | Marathi, Hindi, English | | | |

**10. Work Undertaken that Best Illustrates Capability to Handle the Task Assigned**

**Nature of Work:** **At Shivrai Technologies Pvt Ltd-**

- Led requirement gathering, project task planning, and execution, ensuring alignment with customer objectives and timely delivery.
- To develop sophisticated solutions, I worked extensively with technologies such as computer vision, generative artificial intelligence (GenAI), and natural language processing/natural language understanding.
- Handled and organized large sets of images from drones and satellites for AI projects. This included using cutting-edge computer vision techniques to clean and improve the data, which helped in training effective models for tasks like analyzing crop health, detecting objects, and recognizing spatial patterns.
- Utilized libraries like TensorFlow, PyTorch, transformers, OpenCV, and GDAL for computer vision tasks, as well as SciPy, NLTK, and transformers for text data processing.
- Utilized Django Web framework for rapid web application development and create RESTful APIs to integrate and expose the application's functionalities.

Designed, Developed, Implemented & Solutions in various areas:

**Pest & Disease Identification**– Developed a Deep Learning-based model for detecting pests and diseases in crops and providing optimum management recommendations via APIs and a mobile app.
**Crop Count and Weed Infestation**– Created Deep Learning-based models for plant count and weed area infestation using drone imagery and served the findings as map tiles as well as reports on Web.
**Crop Monitoring and Crop Signature:** Implemented a comprehensive Crop Health Analytics dashboard and map tiles, which use satellite imagery to monitor and assess crop health.
**FScout App**- For everyday field scouting to assess insect infestations in the field using sticky traps, a deep learning-based model for the identification and counting of insects has been developed for mobile and web apps.
**AgExpert –** used RAG (Retrieval Augmented Generation) and GenAI techniques to create a digital AgExpert that can provide the customer with problem-specific advice based on a vast knowledge base.

**Year:** 2020- Till date

**Location:** Pune, India

**Position Held:** Associate – Technology AI/ML

**Nature of Work:** **At Allure Software Pvt Ltd-**

- Developed image processing algorithms for a TryOn Studio, enabling customers to drag and drop earrings onto static ear images, providing a virtual try-on experience before making online purchases.
- Implemented RESTful APIs to seamlessly integrate the TryOn Studio with the website, ensuring smooth interaction and real-time updates for users.

**Projects:**

- TryOn Studio a virtual try-on experience.

**Year:** 2019-2020

**Location:** Goa, India

**Position Held:** Software Developer – ML

**Nature of Work:** **At Dzine Arena Pvt Ltd-**

- Developed visual inspection systems for QA (Quality Assurance) of manufactured products such as magnets, car door latches, and large gears using Python and OpenCV,

implementing techniques like edge detection, image augmentation, and real-time video processing to enhance and analyze images effectively.

- Also developed desktop-based applications using PyQt for user interactions and integrated the QA systems with PLCs and microcontrollers for automatic rejection of defective parts.

**Projects:**

- Visual Inspection Machine to identify defects on Magnets: Mahindra CIE, Pune.
- Visual Inspection Machine to identify Missing Parts from Car Door Latch: Panse Autocomp, Pune
- Rubber Sheet Measurement using Computer Vision: Garware Industries, Wai

**Year:** 2018 - 2019

**Location:** Pune, India

**Position Held:** Python Developer