OMKAR BHUSNALE

+91 7219305459 | Pune, IN | omkarbhusnale23@gmail.com
LINKEDIN | GITHUB | LEETCODE | GeeksForGeeks

PROFESSIONAL SUMMARY

Dynamic Software Engineer with expertise in Machine Learning, Image Processing, and Industrial Automation. Recognized for streamlining production processes and improving quality using advanced vision inspection techniques and automation tools. Passionate about developing innovative solutions and leveraging cutting-edge technologies like C#, ASP.NET, and ReactJS. Experienced in Industrial network, Ethernet network protocols and serial communication protocols.

SKILLS

Languages: C#, VB.Net, Java, Python, JavaScript
Technologies: Machine Learning, Image Processing, Deep Learning.
Databases: Microsoft SQL Server, MongoDB
Frameworks: WPF, Win Form, ASP.NET, Entity Framework, NodeJS, Streamlit, Tesseract OCR, PyPDF2, OpenCV
Design Patterns: MVVM, MVC
Version Control & Tools: GitHub, Gitea, Visual Studio, VS Code, MS SQL, Keyence IV3 Navigator, Bartender SDK
Soft Skills: Problem Solving, Collaboration, Communication, Time Management, Teamwork, Stewardship.
Course Work: Object Oriented Programming, DBMS, Computer Networks, Operating Systems, Data Structures and Algorithms.

EDUCATION

Bachelor of Computer Engineering, Dr. D. Y. Patil IT, Pune	9.11 CGPA	*2020 – 2023*
Diploma in Computer Engineering, MAEER's MIT Polytechnic, Pune	91.66 %	*2017 – 2020*
Secondary School (SSC), MGV, Karjat, Ahmednagar	82.00 %	*2016 – 2017*

WORK EXPERIENCE

General Industrial Controls

Assistant Software Engineer   *July 2024 – Present | Pune, India*

- **Automated manual inspection** using vision inspection techniques with the help of Keyence IV3 Controller, improving production quality by 100%.
- Developed **Programming and Functional Test Automation Software** for Embedded products, reducing testing time by 65%.

Graduate Engineer Trainee   *July 2023 – June 2024 | Pune, India*

- Designed **Automatic Label Printing** for functional test software, which improves **operational efficiency** by **40%**.
- Developed **AOI** using OpenCV and Image Processing, improving quality by 100% **reduced** production **time** by **50%**.
- Integrated Label Printing data into Reporting Solution Web-App, resulting in a **40% improvement in production tracking**.

Software Engineer Intern   *Feb 2023 – Jul 2023, Pune, India*

- Worked on **Proof of Concept** for an **AOI**, reducing estimated testing time by 50% through automation.

GeeksForGeeks

Technical Content Writer   *Aug 2021 – Jan 2022, Pune, India*

- Conducted research and wrote **16 Technical Articles** to meet target audience needs.
- Transformed complex technical insights into easy-to-understand, user-friendly content.

ACHIEVEMENT

- Secured **Silver Recognition** at the **Conference of Indian Industry (CII) DigiAI** for project **Netram** in Machine Learning category Project competition for **innovative implementation** of machine learning concepts.
- **Employee of the Month** for outstanding performance and contributions to Horizontal Deployment of Automatic Label Printing utility into existing Functional Testing software's.
- Received **special recognition** for optimizing the SMPS Programming Process cycle time by integrating device programming and verification at single-stage process for production which significantly reduced process time from 80 sec to 12-15 seconds.

PROJECTS

1. Automatic Label Printing
- Technologies : **Bartender SDK**, **C#**, Microsoft SQL Server, **ASP.NET**
- Developed a stand-alone DLL utility using the **Bartender SDK** for automatic label printing.
- Inserts label data into project-specific database tables, ensuring **isolated data handling** for each host application.
- Enables multiple applications to utilize the DLL parallelly without interference, facilitating **efficient** and **conflict-free operations**.
- Enhanced **modularity** and **reusability**, allowing **easy integration** into diverse software systems.
- Improved **operational efficiency** by enabling **parallel software execution** without data conflicts.

2. Automatic Optical Inspection (AOI) Utility
- Technologies : **C#**, **Ethernet Communication**, IV3 Controller.
- Developed a DLL utility to interface with the Keyence IV3 Controller for **automated optical inspection**.
- The utility facilitates **Ethernet-based communication** between the controller and host software, enabling programmatic control and result retrieval.
- Enabled seamless integration of **optical inspection capabilities** into diverse software systems.
- Streamlined inspection workflows, ensuring **real-time data processing** and **decision-making**.
- Enhanced automation by leveraging controller-specific features for precise optical inspections.

3. Searchable PDF Generator
- Technologies : **Python**, **Streamlit**, PyPDF2, Tesseract OCR, **OpenCV**.
- Developed a web application using **Streamlit** that converts images and PDFs into searchable PDFs using **OCR technology**.
- Supports **batch processing**, **progress tracking**, **file merging** providing users with an efficient and user-friendly experience.
- Utilized **Tesseract OCR** for converting text within images or PDFs into searchable text.
- Processes multiple files simultaneously, including mixed file types (images and PDFs).

4. Asset Management Studio
- Technologies : **ASP.NET** MVC, **MSSQL**, **Entity Framework**.
- Developed a web app for organizational use to **Manage Assets** and their assignments.
- Application is tailored for both **Admin** and **User roles** to enhance **Asset Tracking** and **Reporting**.
- **Internal Assets Switching** Facilitates seamless transfer of assets between users.
- **Customizable Alerts** admin and users about important asset events and updates.
- Provides comprehensive asset and user data with options to export in PDF/Excel formats.
- Delivers visual analytics through **Google Charts** and **Graphs** for better decision-making.