Shardul Dabhane

Bloomington, IN 47408
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Willing to relocate: Anywhere

Work Experience

Research Assistant

HipGraph Group@IU Bloomington,IN - Bloomington, IN
January 2022 to Present

● Developing a Parallel Sparse Matrix library in C++ for efficiently performing Sparse Matrix Operations.

Software Engineer

Persistent Systems Limited - Pune, Maharashtra
July 2019 to July 2021

● Wrote the latest development code in C++ for Strong View, a powerful cross-channel marketing campaign management solution with market-leading data access and analysis.
● Explored analytics tools to integrate into IBM Multicloud Management Platform in collaboration with the Advanced
Tech team in NodeJS, Angular, and Go.

Project Intern

Prescient Technologies - Pune, Maharashtra
July 2018 to July 2019

● Implemented a model that aims at detecting suspended impurities and foreign objects in beverages and used it on a variety of liquids for quality detection and assurance with the help of Computer Vision and sensors, which acted as a contact-free technology for foreign object detection.
● Gathered data (images of bottles on the assembly line and from the sensors) is collected and classified for further QA using Deep Learning and Python for coding.

Education

Master of Science in Computer Science

Indiana University Bloomington - Bloomington, IN
August 2021 to Present

Bachelor of Engineering in Computer Engineering

University of Pune - Pune, Maharashtra
July 2015 to June 2019

Skills

- Python
- C++
- Shell Scripting
- Golang
- MySQL
- Elasticsearch
- Azure
- Firebase
- Kibana
- Docker
- CSS3
- JavaScript
- Angular
- JSON
- PyCharm
- Tensorflow
- PyTorch
- Linux
- Git
- Microsoft Office
- Jupyter Notebook
  Database Technologies: SQL
- MongoDB
- C/C++
- APIs
- GitHub
- Natural language processing
- Google Cloud Platform
- AWS
- AI
- Node.js
- Java
- Machine learning (1 year)
- HTML5
- GitLab
- Design patterns
- PostgreSQL
- TypeScript
- C#

Links

https://www.linkedin.com/in/shardul-dabhane-b71119138

Publications

An Automated Computer Vision Based System for Bottle Cap Fitting Inspection

https://ieeexplore.ieee.org/document/8844942

August 2019

Inspection of the cap is one of the most crucial phases of packaging bottles. Defects like loosely fitted caps, scratches/broken caps may occur. It is important to detect these errors as soon as possible. This paper proposes an automated system by which bottle cap defects can be identified. The bottles with these defects will be rejected by the system. The methods used in this paper are based on computer vision. The system comprises four methods, which are utilized for bottle cap defect detection: Pattern Recognition, Clustering, Object Detection, and Line Detection. This paper also presents a comprehensive analysis and a comparison of all the four methods on various parameters. The system has an extensive social and practical value with increasing productivity, improving the quality of inspection, and profitability.