

DHRUV SHAH

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EDUCATION

Masters of Science in Computer Science
Stonybrook University

Aug 2026
New York, USA

Bachelor of Technology in Computer Science
Nirma University : **CGPA 8.61 / 10.0**

May 2024
Gujarat, India

SKILLS

Languages: Python, Java, C, C++, HTML, CSS, JavaScript, C#

Frameworks and Databases: React.js, Node.js, Spring Boot, SQL, MySQL, MongoDB

Libraries: NumPy, Pandas, SciPy, PyTorch, TensorFlow, Keras, Scikit-learn, OpenCV, NLTK, Seaborn, Matplotlib

Developer Tools: Spark, Hadoop, AWS, GitHub, Android Studio, VSCode

WORK EXPERIENCE

MindQuad Solutions Pvt. Ltd. | Software Engineer

Jul 2022 – Aug 2022

- Engineered Gate Pass and Quality Control modules using **C** and **SAP Business One (SAP B1)**
- Designed a seamless **API for real-time data integration** from industrial weighing scales to SAP, enhancing operational efficiency by 30% and achieving 98% accuracy in weight tracking.
- Collaborated with a cross-functional team to design, develop, and test a scalable system, enhancing quality control processes within SAP at the Inward, In-Process, and Pre-Dispatch stages, leading to a 20% increase in compliance.
- Created and deployed sophisticated reports using **Crystal Reports**, enabling data-driven strategies that boosted quarterly revenue by 18% and reduced reporting time by 40%

AiBorne | Machine Learning Engineer | Certificate

Jul 2022 – Aug 2022

- Implemented an advanced **Instance Segmentation and Object Detection Model** using PyTorch to identify and assess dents, scratches, and scrapes on automobiles, achieving an **accuracy rate of 95%**, and subsequently estimating repair costs within a **10% margin of error**.
- Seamlessly integrated **MLflow** for precise model tracking and constructed a comprehensive data pipeline for classification tasks, training a model to discern car views with over **30+ classes**.
- Developed a **custom Object Detection + OCR model** for reading Digital Odometer. The **mAP for the detection model was 96%**. Experimented on DINO which is an enhanced version of Detection Transformer(DeTR).

ShapeAI | Data Scientist | Certificate

Jun 2021 – Aug 2021

- Contributed to advanced projects utilizing **YOLO** for Object Detection and **OpenCV** for tracking and enumerating objects, specifically applied in manufacturing industries for counting bottles, towels, and boxes, achieving a remarkable **mAP of 97.5%** and sustaining inference test video performance at approximately **50 FPS**.
- Deployed two Proofs of Concept using **Streamlit** and **Flask**: one for detecting defects in fabrics and calculating the affected area, and another for extracting tables from bills or receipts utilizing OCR with Pytesseract.

PROJECTS

Analyze Github Code | Python, Flask, LLM | 🔄

- Built a Chrome extension to obtain summaries of GitHub repositories using **LLMs** and leveraged **Langchain** to interface with **OpenAI's GPT-3.5-turbo**, with **Flask** serving as the backend server to adeptly manage requests.
- Designed an intricate system to traverse each code file in the repository, carefully storing individual summaries, and culminating in a singular, cohesive summary synthesized by the model.

Predictive Modeling for Stock Market Trends | Python, Statistical Analysis | 🔄

- Conducted one-sample t-test and permutation testing to assess the randomness of stock closing trajectories.
- Implemented meticulous feature engineering, introducing handcrafted features 'Bid Ask Spread Percentage' and 'Reference Price WAP Ratio' which provided valuable insights into market dynamics, enhancing the model's predictive capacity.
- Evaluated multiple regression models, incorporating Linear Regression, Ridge Regression, Lasso Regression, and Histogram based Gradient Boosting Regression Tree to identify the best-performing algorithm using Mean Absolute Error metric.

Water Quality Analysis for Sustainable Water Resource Management | Python | 🔄

- Led the development of a Gradient Boosting Classifier (GB) model, achieving an impressive accuracy of 80.14%, outperforming seven other machine learning models
- Leveraged advanced ensemble methods, such as Bagging Classifier and Random Forest, to reach a precision score of 0.80 and a recall score of 0.87, ensuring high reliability in identifying portable water instances while minimizing false positives.
- Conducted thorough performance evaluations using AUC-ROC curves and F1-scores, with the Gradient Boosting model achieving a noteworthy AUC of 0.85 and an F1-score of 0.80, highlighting its robust classification capabilities in real-world applications.