

Tirath Bhathawala

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EDUCATION

SVKM's Dwarkadas J. Sanghvi College of Engineering <i>B.Tech in Computer Engineering (CGPA - 9.18)</i>	Mumbai, India 2022 - 2026
Mumbai Junior College of Arts, Commerce and Science <i>HSC (12th Boards - 91.5%, MHTCET - 99.5%)</i>	Mumbai, India 2019 - 2021

EXPERIENCE

IIT Patna <i>Research Intern</i>	October 2024 - Current
<ul style="list-style-type: none">* Conducted research on argumentation-based scoring of 900+ peer reviews, implementing novel aggregation frameworks for automated quality assessment* Developed and analyzed datasets using LLMs, achieving high inter-annotator agreement across 10 evaluation criteria	
Nvelop Technologies Oy <i>AI Intern</i>	August 2024 - November 2024
<ul style="list-style-type: none">* Devised workflows in Azure AI Promptflow for automated document processing, streamlining generation and retrieval tasks* Optimized chunking and overlap parameters for 50+ RFPs, improving document retrieval perplexity by 25%	
PavePilot AI <i>Python (LLM) Development Intern</i>	June 2024 - July 2024
<ul style="list-style-type: none">* Developed an automated procedure to generate personalized posters for content creators, enhancing the visual appeal and engagement of their blog posts	
UIUC+ Summer Research Program <i>Research Assistant</i>	May 2024 - July 2024
<ul style="list-style-type: none">* Investigated the challenges and potential solutions in C to Rust translation by summarizing 5+ research papers (VERT, Lost in Translation, etc.) and analyzing the results of well-known transpilers and CodeLLMs* Evaluated the quality of LLM-generated code by identifying and documenting potential bugs in the generated code snippets. This work will be used to inform future research on LLM-generated code quality	

Extra Co-Curricular

DJSCE ACM Research Head
<ul style="list-style-type: none">* Leading and mentoring research initiatives across various Computer Science domains for 50+ second-year students, creating weekly learning notebooks for research topics

PROJECTS

Optima OpenCV
<ul style="list-style-type: none">* Optima revolutionizes healthcare by offering real-time detection and analysis of human posture and actions, specifically targeting asthma pump usage, to provide precise insights into patient behavior and enhance treatment outcomes* Spearheaded the development of precise features such as posture detection, shake tracking, pump-to-face distance measurement, and personalized treatment insights, enhancing healthcare monitoring and patient engagement
RakshakRita BERT, nltk, seaborn, matplotlib, networkx, plotly
<ul style="list-style-type: none">* RakshakRita is a QR-based Police Feedback System, empowering citizens to voice their opinions on policing* Implemented NLP tasks like language translation, zero-shot classification, spam detection, chatbot creation and sentiment analysis. Crafted dynamic feedback reports on police stations using interactive heatmaps
ML and CV Fundamentals tensorflow, keras, pandas
<ul style="list-style-type: none">* Implemented deep learning models for medical image segmentation using the RSNA Breast Cancer dataset (pydicom, torchvision)* Developed computer vision algorithms for object detection and image classification (CNN) (Oxford-IIIT Pet, MNIST, CIFAR10)

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Java, HTML/CSS, JavaScript, SQL, React, Rust
Tools: Linux, Git, Kaggle, Google Colab, Docker
Frameworks/Technologies: Streamlit, Tensorflow, Keras, OpenCV, Flask, PyTorch, NLTK, AzureAI
Relevant Coursework: Data Structures, Analysis of Algorithms, Data Warehouse and Mining, Artificial Intelligence, OOPS

ACHIEVEMENTS

Winner in CodeBounty, a college competitive programming contest
Finalist in the Rajasthan Police Hackathon 2024 (ML Lead)
Finalist in the Gujarat G20 Summit Hackathon 2023 (ML Lead)