

# Dominic Parosh Yamarathi

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## Summary

I have over 5 years of experience in developing and deploying AI and machine learning models across diverse domains, including NLP, computer vision, and big data analytics. My projects have involved cutting-edge techniques in generative AI, human action recognition, and predictive analytics, achieving significant accuracy and performance metrics. I have also led and contributed to various research initiatives, resulting in the publication of impactful findings.

## Education

<b>State University of New York at Buffalo</b> <i>MS in Data Science</i>	<i>Feb 2023 – June 2024</i>
<b>Gayatri Vidya Parishad College of Engineering(A)</b> <i>B.tech in Computer Science</i>	<i>Sept 2014 – May 2018</i>

## Experience

<b>Generative AI Engineer</b> <i>Verizon</i>	<i>Basking Ridge, NJ</i> <i>April 2025 – Present</i>
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- Working on the Generative Testing as a Service (GenTaaS) platform to automate software QA using Large Language Models.
- Develop LLM-powered systems for automatic test case generation, script generation, and intelligent defect analysis.
- Build prompt engineering strategies and evaluate GenAI outputs for correctness, diversity, and test coverage.
- Integrate GenAI services into CI/CD pipelines for seamless test execution and reporting.
- Collaborate with QA and DevOps teams to improve test workflows and deliver production-grade automation tools.
- Utilize Python, PyTorch, Hugging Face Transformers, Docker, REST APIs, and AWS cloud infrastructure.

<b>Research Assistant/Graduate Teaching Assistant</b> <i>University at Buffalo</i>	<i>Buffalo, NY</i> <i>Jan 2024 – Mar 2025</i>
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- Conducted research and data collection for developing cutting-edge generative AI solutions using Python, PyTorch, TensorFlow, and Hugging Face.
- Designed and developed prototypes for generative AI applications, including LLMs, text generation, and synthetic data creation.
- Integrated and fine-tuned Transformer models and deployed experiments in cloud environments with AWS and Docker.
- Assisted with the Data Intensive Computing (CS 487/587) course, managing projects, assignments, quizzes, and exams.
- Provided detailed feedback to over 200 students, improving performance and academic engagement.

<b>Machine Learning Engineer</b> <i>TechNVision</i>	<i>Hyderabad, India</i> <i>Aug 2018 – Dec 2022</i>
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- Maintained data reporting for PNG across global D2C and D2B marketing and E-commerce streams.
- Conducted analytics and visualized insights using SQL and Power BI for decision-making support.
- Developed Tableau dashboards and conducted operational analytics to improve efficiency and reduce costs.
- Enhanced Python automation scripts, contributing to significant time savings.

## Projects

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### Multimodal Fake Review Detection:

[github](#) 

- Using a combination of transformer-based text encoders and CLIP-style vision models, our system learns to fuse semantic and visual cues for robust classification. We curate a hybrid dataset of real and synthetically generated reviews, propose novel multimodal fusion techniques, and release an open-source toolkit for fake review detection.

### Hive:

<https://thehiveuni.com/> 

- HIVE is a student-powered platform dedicated to transforming campus life by unifying events, clubs, and communities into one seamless experience, empowering you to take control of your campus experience.

### Predicting Accidents in US using Random Forest Regression:

[github](#) 

- Detailed traffic data analysis using random forest regression, achieving accuracy 80% in predicting accidents and contributing to policy recommendations to improve road safety.

### Gender Prediction Using RNN on Sonograms:

[github](#) 

- With an accuracy rate of 72%, the objective entails predicting the gender (Male/Female) from provided sonogram images.

### Database Management System with Tableau Visualization:

[github](#) 

- Designed and maintained a comprehensive Fifa23 Players database using advanced database design theory, Python for data preparation, and E/R modeling with normalization techniques. Crafted efficient SQL queries for retail analytics and developed an interactive Tableau dashboard to provide dynamic visual insights into player statistics.

## Technologies

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**Programming Languages:** Python, Java, SQL, R.

**Database Management:** MySQL, PostgreSQL, SQLite, MongoDB, VectorDB, NoSQL, BigQuery.

**Machine Learning & AI:** TensorFlow, Keras, PyTorch, scikit-learn, OpenCV, NLP, Transformers, BERT, GPT-2.

**Big Data Technologies:** Hadoop, Apache Spark, Spark Streaming, Hive, Kafka Stream.

**Cloud & DevOps:** AWS, Google Cloud Platform, Azure, Docker, Kubernetes, Jenkins.

**Business Intelligence & Visualization:** Tableau, Power BI, Matplotlib, Seaborn, Plotly.