Sahityabhilash Kollipara

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Summary

Computer Science graduate with experience in web development, rendering optimization, and AR/VR systems. Proficient in designing and developing full-stack web applications using React, Node.js, Python, and MongoDB, with a strong focus on building scalable and maintainable solutions. Hands-on expertise in designing hardware-accelerated pipelines and implementing real-time rendering techniques to enhance performance.

Education

Villanova University August 2024 – Present
Master of science ,Computer Science *Villanova, PA, USA*

Sathyabama Institute of Science and Technology July 2016 – May 2020
Bachelor of Engineering, Computer Science and Engineering *Chennai, Tamilnadu, India*

Technical Skills

Programming Languages: JavaScript, Python, C++, TypeScript, R

Database Management: MySQL, MongoDB, PostgreSQL, Sequelize

Tools & Technologies: AWS, React, Node.js, Jenkins, CUDA, OpenGL, Vulkan, Git, Docker, FFmpeg

Experience

Research Assistant Sep 2024 – Present
Villanova University *Villanova, PA*

- Designed and implemented an end-to-end H.264 decoding pipeline using NVIDIA NVDEC, achieving real-time 1080p60 performance with GPU-resident decoded surfaces.
- Developed zero-copy CUDA–OpenGL interop using PBOs and integrated with GLFW to enable low-latency frame presentation.
- Built CUDA kernals to post process the decoded frames.
- Collaborated with researchers and engineers to align encoding-decoding workflows with real-time system requirements and visual quality benchmarks.

Software Development Engineer II June 2022 – August 2024
S&P Global Inc. *Hyderabad, India*

- Developed a web-based API development application using React, Node.js, and MongoDB to send and manage HTTP requests, view responses, and handle authentication. Delivered a cost-efficient in-house solution, reducing the dependency on third-party tools and saving approximately 25% in operational costs. Enhanced API development efficiency by 40% through features such as request saving, environment variable management, and response analysis.
- Built a Dockerized startup template for Java-based automation frameworks, enabling seamless CI/CD pipelines through Jenkins.
- Developed a low-code/no-code automation platform using Python, React, and Postgres, streamlining test case design, element extraction, and execution workflows and reducing test automation time by 30%.

Software Development Engineer in Test Feb 2021 – May 2022
COMCAST India *Chennai, India*

- Implemented a data pipeline to load test user data into the Teradata warehouse.
- Analyzed and enhanced test automation frameworks, increasing efficiency by 30%.
- Documented test plans, cases, and procedures, reducing test execution time by 20%.
- Developed SQL scripts, stored procedures, and triggers for application data validation.

Publication

Paper Title: Impact of loss function using M-LSTM Classifier for Sequence Data.
International Journal of Psychosocial Rehabilitation (ICCSP).