AKSHAR GOTHI

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PROFESSIONAL SUMMARY

Innovative Software Engineer with 3+ years of experience in end-to-end full stack development, LLM fine-tuning, transformer-based architectures, and DevOps. Proficient in building scalable, microservices-based architectures using AWS, Kubernetes, and Docker. A results-driven team player with growth mindset, effective written and verbal communication skills, adept at optimizing system performance, LLM inference optimization, quantization, API integrations, and developing robust CI/CD pipelines. Skilled in technical problem-solving, decision making, attention to detail, cloud technologies and writing technical design documents.

EDUCATION

San Francisco State University, San Francisco, California, USA [GPA-3.63/4] **August 2023 – December 2025**
Master of Science: Computer Science

- *Relevant Coursework:* Software Engineering, Analysis of Algorithms, Natural Language Processing, Data Mining, Machine Learning

Chandubhai S Patel Institute of Technology, Gujarat, India [GPA-3.5/4] **July 2017 – May 2021**
Bachelor of Technology: Information Technology

- *Relevant Coursework:* Object-Oriented Programming, Data Structures, Operating Systems, Mathematics, Cloud Computing

WORK EXPERIENCES

Software Engineer - *Tatvasoft*, Ahmedabad, India (React.js, Python, MySQL, AWS) **[July 2021 – August 2023]**

- Accelerated development speed by 30% by designing scalable MVC-based e-commerce CMS enterprise software for 2M+ products, leveraging agile methodologies and distributed storage solutions like AWS S3 for efficient asset management.
- Significantly boosted user engagement by 20% through close cross functional collaboration with designers and product teams to implement highly personalized, interactive user-centric features, responsive product design and Elasticsearch dynamic search experience.
- Improved site performance by 10% and increased organic traffic via advanced SEO strategies, including keyword optimization.
- Substantially reduced backend processing time by 30% across 10+ critical workflows by automating repetitive tasks with shell scripting.
- Enhanced payment UX for 10,000+ customers by integrating Stripe and PayPal gateways with secure, seamless solutions.
- Maintained a defect rate below 1% through rigorous testing, debugging, and ensuring robust production deployments, leading to improved customer service and user satisfaction.

Backend Engineer - *Reviewdale*, Remote -India (React.js, Node.js, MySQL, GCP) **[July 2020 – August 2021]**

- Built a scalable, distributed microservices-based platform for Amazon and Flipkart review analysis, leveraging a data warehouse to raw data transformation into structured insights, reducing execution time by 23%.
- Developed secure REST API web services for payment solutions with Google Ads and Razorpay, integrating transactional data.
- Optimized CI/CD pipelines with Docker and Google Cloud triggers, reducing deployment downtime by 15%, while ensuring real-time updates to the data warehouse for analytics.

PROJECTS

YoudescribeX (Python, React.js, MongoDB) **[November 2024]**

- Fine-tuned small LLMs using LoRA and QLoRA to improve audio descriptions for video accessibility in data pipeline, achieving 30% lower latency in text-to-speech generation.
- Migrated from YOLOv3 to YOLOv8, achieving 92% faster processing and improved accuracy, enabling efficient and precise detection of objects in complex video frames.
- Halved processing time from 30 to 15 minutes by integrating queue-based SQLite with AWS Lambda and DynamoDB, ensuring scalability and optimized resource utilization.
- Compared ChatGPT and Gemini-generated captions using cosine similarity and used ChatGPT to generate a cohesive video description summarization, enhancing content quality and accessibility.

Realtime Hurricane Prediction: (React JS, Flask, GCP, TensorFlow, Google Earth Engine) **[Oct 2024]**

- Developed an ML-based alert platform during CalHacks 2024 in just 36 hours, utilizing machine learning techniques to achieve 95% accuracy in real-time hurricane predictive models.
- Processed a dataset containing 35,843 rows, combining spatial and temporal features to deliver precise and reliable weather forecasting insights using regression-based techniques.
- Designed an intuitive weather dashboard using Google Maps integration, enabling users to view real-time metrics and hurricane predictions for 100+ locations based on latitude and longitude.
- Leveraged Gemini AI to address hurricane-related queries, providing users with accurate, data-driven insights to enhance decision-making and emergency preparedness.

EfficientNet vs ViT: Image Classification Analysis: (Pytorch, Transformer, Kaggle, Python) **[July 2024]**

- Achieved 97% classification accuracy on the imbalanced SpaceNet dataset using EfficientNet, outperforming ViT by 6% in precision and recall, showcasing robustness in fine-grained computer vision tasks for astronomical image classification.
- Optimized Transformer-based image classification predictive model, achieving 48.72 seconds inference time with EfficientNet compared to 79.52 seconds with ViT.
- Improved model size efficiency, with EfficientNet requiring 47 MB compared to ViT's 327 MB, making it more suitable for deployment in resource-constrained environments.

TECHNICAL SKILLS

Programming Languages: JavaScript, Python, C/C++, Java, R, PHP **Database:** PostgreSQL, Redis, NoSQL, Firebase, OracleDB
Frontend Technologies: HTML, CSS, Next.js, TypeScript, jQuery **Backend Technologies:** Express.js, Django, SQL, Spring
Other Tools / Software: JIRA, Postman, Docker, Git, Azure, Hugging Face, Bitbucket, Kafka, Apache, Figma, Slack, version control

LEADERSHIP

President - Computer society of India at Chandubhai S Patel Institute of Technology **[August 2020-May 2021]**
Technical Team Member – Google Developers student Club at Chandubhai S Patel Institute of Technology **[December 2019-May 2020]**