

Dharma Acha

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EDUCATION

State University of New York at Buffalo - *Master of Science in Computer Science and Engineering*
Deep Learning, Reinforcement Learning, Computer Vision, NLP, LLM, Computer Networks, Design Patterns
Jawaharlal Nehru Technological University - *Bachelor of Electrical and Electronics Engineering*
Machine Learning, Data Structures, Algorithms Analysis and Design, System Design

Aug 2023 - Dec 2024
USA
Aug 2017 - May 2021
India

SKILLS

Programming Languages: HTML 5, CSS 3, JavaScript (ES6+), TypeScript, C, C++, Java, Python, R, PHP

Databases: MongoDB (NoSQL), MySQL, PostgreSQL, Redis, Kafka

DevOps & Cloud Platforms: CI/CD, Jenkins, Microsoft Azure, GCP, Docker, AWS, SaaS, SDLC

Frameworks: React JS, Angular, Next JS, Redux, Node JS, Express JS, GraphQL

Tools & Libraries: Git, Pandas, PyTorch, TensorFlow, PySpark, Keras, NumPy, Matplotlib, Scikit-Learn, JIRA, Linux, Postman, Sass, JSON, NPM, Webpack, Babel, AJAX, Jest, jQuery, Bootstrap

PROFESSIONAL EXPERIENCE

State University of New York at Buffalo

Jan 2025 - Present
Buffalo, USA

Research Assistant

- Research in **Computer Vision and Image Processing**, utilizing **OpenCV** and deep learning to analyze and synthesize large datasets.
- Presented research findings in regular meetings, improving project direction by **25%** through iterative feedback.

Cognizant Technology Solutions

May 2021 - Aug 2023
India

Software Engineer

- Fast-tracked delivery of major customer-facing web applications, owned frontend codebase, employing **React**, **JavaScript**, and **Tailwind CSS**, resulting in a 40% reduction in customer support queries.
- Developed high-performance backend solutions with **Node JS** and **Express JS**, optimizing system scalability to handle a 50% surge in concurrent users. Securing API endpoints with **JWT** and **OAuth** authentication, strengthening data protection.
- Leveraged **Next JS** and **GraphQL** to develop APIs for both internal and external use at Walgreens, reducing the time to deploy new front-end features by 4%. Utilized **Redis** for optimized caching and data retrieval, boosting overall system performance.
- Migrated legacy on-premises infrastructure to a cloud-native architecture on **AWS**, utilizing services like **EC2**, **S3**, **Lambda** and **RDS**, resulting in a 35% reduction in infrastructure costs and achieving 99.99% uptime.
- Implemented **CI/CD** pipelines for a dockerized Shutdown and Maintenance Scheduler deployed on **Kubernetes**, integrating **Kafka** for real-time event streaming, driving a 50% improvement in **ERP system** efficiency and enhancing resource utilization through optimized horizontal autoscaling.
- Optimized **Microservices** for the Product Inventory Management System, achieving a 25% reduction in **REST API** latency and a substantial increase in throughput by implementing efficient indexing and caching strategies.
- Enhanced team confidence and deployment capabilities in Marketplace by implementing advanced testing methodologies. Developed extensive test suites using **Jest**, **React Testing Library** and **Unit test**, achieving over 90% code coverage.
- Spearheaded efforts to enhance software reliability by introducing **end-to-end** automation tests. Significantly improved the testing process, leading to a 20% reduction in deployment errors and a more reliable software delivery timeline.
- Key contributor to backend enhancements by integrating the Defect Tracking System application with **MongoDB**. This integration significantly enhanced system efficiency and reducing downtime by 15%.
- Led the transition from manual setup and resource management to adopting **Infrastructure as Code (IaC)** using **AWS CDK** and **ECS**, resulting in a 30% reduction in provisioning time.
- Transformed codebase efficiency by crafting reusable **React** components, elevating code reusability by 60%. Developed **TypeScript** functions, followed **agile methodologies** with conditional logic, deployed across multiple modules.
- Leveraged **Redux** for state management, optimized component reusability with the implementation of **Higher-Order components**, realizing a 45% efficiency gain.

PROJECTS

LSTM for Sentiment Analysis | PyTorch, TensorFlow, Keras

- Refined **LSTM** models to analyze **Twitter US Airline** Sentiment dataset, elevating test accuracy from 65% to 80% by incorporating **bidirectional layers**, which significantly improved model stability and prediction consistency over **1000 epochs**

HireFlow - Employability Classification Tool | Pandas, Scikit-Learn, Streamlit, Matplotlib

- Deployed a cutting-edge web application, utilizing predictive and classification machine learning models using **logistic regression**, **decision trees**, and **random forests** and achieved an impressive accuracy rate of 92% in predicting candidate suitability

Face Detection | Python, OpenCV, NumPy

- Developed a face detection system using **Viola-Jones framework**, achieving 95% detection accuracy on **Fddb** dataset. Leveraged integral images for 10x faster **feature computation** and optimized an **attentional cascade model**, reducing false positives by over 90%, improving real-time detection speed to **15 FPS**.