

Dhayaneswar Balusamy

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EXPERIENCE

Research Assistant - Software Development

May 2023 – Present

SUNY Research Foundation - Meta Inc.,

Buffalo, New York

- Collaborated with Meta to develop novel checkpoint system for fault tolerance and seamless recovery from system crashes.
- Implemented distributed architecture in AWS EC2 instances with EFA and ParallelCluster to scale production deployments.
- Enhanced system throughput and performance by 42% by streamlining task execution using Kafka message queuing system.
- Leveraged Docker and Kubernetes for scalable deployment of recommendation system in HPC and distributed environment.
- Led implementation of asynchronous operations in Python, improving system efficiency and enabling timely recommendation.

Software Engineer - Full-Stack

September 2020 – September 2022

Newgen Software Technologies

Chennai, India

- Designed workflows and developed end-to-end content management and enterprise applications by following Agile SDLC.
- Revamped UI components using AngularJS, ReactJS, HTML5, and CSS3 to create dynamic and modular components with data-intensive features, achieving 35% improvement in user interaction metrics.
- Built robust backend services with NodeJS, refining data transaction efficiency and simplifying third-party integrations with JWT-based authentication and scalable middleware architecture.
- Developed microservices using Java Spring Boot for SaaS solution, ensuring modular architecture that reduced production deployment times by 30%, enabled seamless integrations, and reduced time-to-market for new features.
- Leveraged Redis caching and GraphQL with indexing, pagination, and query optimization techniques to reduce API call overhead by 30%, significantly enhancing application performance and data retrieval speeds.
- Developed REST API using Java and AWS services like API Gateway, Lambda, and RDS to ensure scalability and security.
- Led Test-Driven Development (TDD) for robust coding practices, achieving over 90% code coverage with JUnit and Mockito

Software Engineer Intern

August 2020 – September 2020

Newgen Software Technologies

Chennai, India

- Optimized SQL queries, functions and procedures, resulting in 40% improvement in overall database querying performance.
- Streamlined CI/CD pipelines with Jenkins, Docker, and Git, reducing integration issue and accelerating release cycle by 40%.

PROJECTS

Software Design Architecture: Core Patterns for Scalable Solutions

January 2024 – May 2024

- Implemented Factory Method Pattern in OOP for dynamic document generation, enhancing code scalability and flexibility.
- Designed API Gateway, achieving 30% improvement in request handling efficiency and security for microservice interactions.

ChatFusion: Full-Stack Messaging Application

August 2023 – December 2023

- Developed real-time messaging application with user authentication using JWT for secure user sessions and data protection.
- Integrated real-time group chat functionalities utilizing WebSockets, and Node.js for instantaneous message exchanges.

DataFlow: Maximizing Data-Intensive Computing and Modelling

January 2023 – May 2023

- Developed Full-Stack web solution for data cleaning, EDA, and dynamic visualizations for streamlined insight generation.
- Integrated flexible data ingestion mechanism that allowed web application to accept and process diverse diabetes datasets.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Java, Python, SQL, HTML5, CSS

Frameworks: React, Angular, NodeJS, jQuery, Spring Boot, Hibernate, Express, GraphQL, REST and SOAP APIs

Databases: MySQL, MongoDB, Oracle DB, PostgreSQL

Software and Tools: AWS, GCP, Kubernetes, Docker, Kafka, Redis, Git, Jest, CI/CD Ops

EDUCATION

University at Buffalo, The State University of New York

August 2022 – May 2024

Master of Science in Computer Science. GPA - 3.71/4.0

Buffalo, New York

Anna University

August 2016 – May 2020

Bachelor of Engineering in Computer Science. GPA - 8.22/10.0

Tamil Nadu, India