

Nandhini Dhanasekaran

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PROFESSIONAL EXPERIENCE

Full-Stack Engineer

April 2025 – Present

Radiance Learning

Bellevue, WA

- Developed a role-based, scalable backend using Node.js, Express, and MongoDB, enabling admin-controlled content and dynamic student mapping.
- Integrated secure REST APIs with a React.js frontend, leveraging Mongoose for data ops and robust error handling to enforce access control and ensure system reliability.
- Deployed the application on Azure App Service, integrated CI/CD pipelines, and implemented production-grade routing, logging, and availability checks, aligning with cloud-native design principles.

Software Engineer - Front End

June 2024 – April 2025

Health Chain

Plano, TX

- Developed a responsive and accessible Consent Management Portal in Next.js, TypeScript, and Tailwind, integrating modular architecture and dynamic components via Lucide Icons.
- Designed and deployed secure backend services with API authentication and role-based access on Azure App Service, handling sensitive healthcare data in compliance with privacy standards.
- Leveraged React Query for API data caching and communication, improving performance and system responsiveness.
- Collaborated with architects to align frontend components with overall data architecture and API schemas.

SDET

July 2020 – August 2022

Infosys Limited

Chennai, IN

- Led QA for a European banking platform, improving microservice reliability by 30% through test automation using Java, Selenium, and Agile workflows.
- Achieved a 50% reduction in regression testing time through extensive automation testing, driving project success in a €5.578 billion revenue environment.

Software Engineer Intern- Front End

Dec 2019 - Mar 2020

MulticoreWare Inc

Chennai, IN

- Developed dynamic and responsive UIs for ML dashboards using React to facilitate real-time data visualization and ensure seamless integration of back-end data.
- Worked alongside UI/UX designers to understand best practices in web design and implement user-friendly features for enhanced user experience.

PROJECTS

CodeOrbit – Cloud-Based Collaborative IDE | *React, Docker, AWS EC2, Node.js, Monaco, Socket.IO*

May 2025

- Architected a cloud IDE with real-time collaboration via Socket.IO rooms, enabling multi-user sessions with auto state recovery and 150 ms latency.
- Dockerized language-agnostic runners (JS, Python, Java) on AWS EC2, automating CI/CD via GitHub Actions, cutting deploy time by 40%.
- Implemented advanced UX with syntax highlighting, avatar presence, and dynamic room-switching for seamless coding collaboration.

Enhanced Big Data Processing Pipeline | *Python, ML*

Dec 2023

- Led the design of a scalable Big Data analytics pipeline using Python, ML models (Logistic Regression, XGBoost, KMeans), and Google Colab, streamlining ingestion, prediction, and validation.
- Optimized data wrangling and modeling processes, delivering a 40% performance improvement and 15% cost reduction, aligning with production-quality standards.

AWS TLQ Data Pipeline | *Java, AWS Lambda, AWS EC2, AWS API Gateway, Amazon S3, SQLite*

Nov 2022

- Constructed a scalable, cloud-native data pipeline using Java, AWS Lambda, EC2, API Gateway, and S3, enabling efficient real-time ingestion and processing of dynamic data.
- Optimized filtering and transformation logic using SQLite, reducing stream processing costs by 45%, while ensuring scalability and secure API access.

EDUCATION

University of Washington

Seattle, WA

Master of Science in Computer Science and Systems

Sep. 2022 – Mar 2024

Anna University

Chennai, IN

Bachelor's in Electronics and Communication

Nov. 2016 – Apr 2020

RESEARCH PUBLICATION

IoT Based Emergency Alert System: A novel multi-faceted safety and health monitoring system integrating IoT to enhance road safety, women safety, and provide continuous health monitoring for the elderly.