

Nandhini Dhanasekaran

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EDUCATION

University of Washington

Master of Science in Computer Science and Systems

Seattle, WA

Sep. 2022 – Mar 2024

Anna University

Bachelor's in Electronics and Communication

Chennai, IN

Nov. 2016 – Apr 2020

PROFESSIONAL EXPERIENCE

Full-Stack Engineer

April 2025 – Present

Radiance Learning

Bellevue, WA

- Developed a role-based backend using Node.js, Express, and MongoDB, supporting admin-restricted post creation and dynamic student mapping.
- Integrated REST APIs with a React.js frontend for dynamic UI rendering, leveraging Mongoose for DB operations, error handling, and role validation for scalable volunteer task workflows.
- Deploying the full-stack application on Azure App Service with Cosmos DB, integrating CI/CD and production-grade API routing.

Software Engineer - Front End

June 2024 – Present

Health Chain

Plano, TX

- Developed a Consent Management Portal in Next.js, TypeScript, Tailwind CSS and Lucide Icons for a responsive, accessible UI.
- Built and deployed backend services with API authentication, error handling, and secure healthcare data handling.
- Integrated React Query for efficient state management and API communication, with a modular, scalable frontend architecture.

Software Engineer

July 2020 – August 2022

Infosys Limited

Chennai, IN

- Led quality assurance for a Belgium-based banking platform, reducing microservice errors by 30% through Automation with JAVA and Selenium, while managing test cases, reporting and tracking bugs in JIRA.
- Collaborated with multi-functional teams to define requirements, develop test plans, design test cases within the SDLC, and support releases, while working in an agile environment to ensure product reliability and performance.
- Conducted extensive manual and automation testing, achieving a 50% reduction in regression testing time and consistently exceeding daily targets.
- Leveraged Grafana to track and visualize the quality metrics, 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 user interfaces for machine learning 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 | *Docker, AWS EC2, Node.js, Monaco, Socket.IO* March 2025 - May 2025

- VS Code-style browser IDE (React + Monaco, Node.js) with real-time collaboration via Socket.IO rooms, sustaining 20+ users at 150 ms and auto state recovery after refresh.
- Dockerized language-agnostic runners (JS, Python, Java, C++) on AWS EC2, with GitHub Actions → EC2 CI/CD and monitoring that cut deploys by 40%.
- Polished UX: dynamic syntax highlighting, room switching, and avatar-based presence indicators.

Enhanced Big Data Processing Pipeline | *Python, ML*

Oct 2023 - Dec 2023

- Spearheaded the development of a highly efficient Big Data analytics pipeline, integrating Google Colab, python libraries, and trained ML models including Logistic Regression, XGBoost Classifier, and KMeans.
- Streamlined data processing through Data Wrangling, EDA, and advanced Prediction, Inference, and Validation steps.
- Realized a significant enhancement with a 40% acceleration in data processing, concurrently achieving a 15% reduction in operational costs.

AWS TLQ Data Pipeline | *Java, AWS Lambda, AWS ECS, AWS API Gateway, Amazon S3, SQLite* Oct 2022 - Nov 2022

- Constructed a scalable data processing pipeline using JAVA and AWS, enabling efficient handling of large, dynamic data sets.
- Incorporated advanced query filtering, aggregation, and transformation techniques in SQLite, leveraging AWS resources, resulting in a 45% reduction in data stream processing costs.

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.