

Madhu Chandrika Balram

✉ mbalram@depaul.edu

☎ +1 (708) 906-2741

🌐 LinkedIn

🐙 GitHub

📁 Portfolio

EDUCATION

DePaul University

Master's in Computer Science | 4 GPA

Chicago, USA

Expected - Aug 2026

REVA University

Bachelor of Technology in Electronics and Communication | 3.7 GPA

Bangalore, India

Jun 2022

PROFESSIONAL EXPERIENCE

Custom Software Engineering Associate

Accenture (Technologies: Heroku, Java, Heroku Postgres, Papertrail)

12/01/2022 – 07/27/2024

Bangalore, India

- Optimized Java-based applications hosted on Heroku, improving deployment, configuration, and database management for enhanced performance.
- Proactively monitored application logs using Papertrail, identifying and resolving performance bottlenecks to ensure application reliability.
- Collaborated with cross-functional teams to troubleshoot software and database issues, implementing efficient solutions aligned with best practices.
- Conducted regular system performance reviews to improve software efficiency, reducing downtime and improving overall system stability.

Programmer Analyst Trainee Intern

Cognizant (Technologies: Java, Selenium WebDriver, MySQL, Maven)

02/01/2022 – 06/17/2022

Bangalore, India

- Developed automated test scripts using Selenium WebDriver and Java for Oracle PeopleSoft, improving testing efficiency and accuracy.
- Integrated MySQL with the testing framework, optimizing data management for automated tests and enhancing the overall workflow.
- Collaborated with team members to enhance the automation testing process, reducing reliance on manual testing and improving overall test reliability.

PROJECTS

Personal Portfolio Website

Tech Stack: HTML, CSS, JavaScript, Netlify

Feb 2025

- Developed a mobile-responsive single-page portfolio using HTML, CSS, and JavaScript to highlight full-stack projects and professional background.
- Structured clean, modular code with smooth scrolling and modern UI/UX to enhance user engagement and accessibility.
- Deployed on Netlify with GitHub integration for automated builds, live updates, and version-controlled hosting.

Distributed File Retrieval Engine

Tech Stack: Java, gRPC, Protocol Buffers, Multithreading, Maven

March 2025

- Developed a scalable client-server system using gRPC and Protocol Buffers to handle concurrent document indexing and search operations.
- Implemented a thread-safe inverted indexing engine and multithreaded request handling to support high-throughput AND-term queries.
- Designed modular architecture with clean separation of client and server logic, following best practices in distributed backend development.

E-Commerce Product Store

Tech Stack: React.js, Node.js, Express.js, MongoDB, Tailwind CSS, Zustand, JWT, Redis, Stripe, Railway

April 2025

- Built a full-featured MERN stack e-commerce app with secure user auth, admin panel, and product management.
- Designed responsive UI using React.js, Tailwind CSS, and Zustand for efficient state management.
- Developed backend APIs with Express.js and MongoDB; implemented JWT auth and Redis-based session handling.
- Integrated Stripe for payment processing and deployed the full-stack application on Railway.

TECHNICAL SKILLS

Programming Language — C/C++, Java, Python, JavaScript, HTML, CSS

Frameworks & Libraries — React.js, Node.js, Express.js, Zustand, Tailwind CSS, Maven

Database Technologies — MongoDB, MySQL, Heroku Postgres

Cloud & DevOps Tools — Heroku, Netlify, Railway

Version Control — Git, GitHub

Testing & Automation — Selenium WebDriver

Log Management Tools — Papertrail, Logtail

Optimization — Data structures, algorithms, object-oriented programming, Distributed systems, REST APIs

CERTIFICATE

- **Salesforce**- Salesforce Certified Administrator Mar-26-2024
- **Microsoft**- Introduction to Programming Using Python Sep-01-2020
- **Udemy**- The Complete Full-Stack Web development Bootcamp Feb-05-2025