

# HARSHINI BHARANIDHARAN

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## EDUCATION

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**Master of Science in Computer Science, University of Massachusetts Amherst**

Amherst, MA

GPA: 3.9/4

09/2023-05/2025

**Bachelor of Technology in Information Technology, SSN College of Engineering**

Chennai, IN

CGPA: 9.2/ 10

08/2018-06/2022

**Relevant Courses:** Database Design and Implementation, Systems for Data Science, Machine Learning, Theory and Practice of Software Engineering, Secure Distributed Systems, Methods of Applied Statistics

## PROFESSIONAL EXPERIENCE

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**Freshworks, Software Engineer**

Chennai, IN, 08/2022-08/2023

- Led the implementation of automated cloud governance and compliance protocols across AWS services, achieving a 5% cost reduction without compromising on performance or security.
- Facilitated Agile development processes and CI/CD pipeline integration using Docker and Jenkins.
- Utilized Python, Django, JavaScript, and the AWS SDK to develop a comprehensive dashboard that increased visibility into cloud service expenditures, enabling better cost management decisions.
- Collaborated with cross-functional teams to integrate cloud cost analysis tools, such as AWS Cost Explorer, into existing financial reporting systems, reducing manual data entry by 30% and improving accuracy.

**ITK Education Services Pvt. Ltd, Software Developer Intern**

Chennai, IN, 03/2022-05/2022

- Conducted a full-cycle software development process including requirement analysis, application customization, and comprehensive testing using the ZOHO Creator Platform and Deluge scripting language.
- Designed and implemented Enterprise Resource Planning (ERP) software to manage the entire process involving multiple stakeholders, from lead acquisition to product delivery, enhancing operational efficiency by 20%.

**Scienaptic Systems, Software Engineer Intern**

Bengaluru, IN, 07/2021-08/2021

- Developed and deployed a RESTful API using Flask to streamline data access in MongoDB databases.
- Engineered a web application using PostgreSQL, Spring Boot, and Angular to enable users to view, search, delete, and add books to a cart.

## PROJECTS

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**Fitness Tracker — Full Stack Web App:**

01/2024

- Developed a full-stack web application, using the MERN (MongoDB, Express.js, React.js, Node.js) stack, that allows users to log their workouts, track macronutrients and set fitness goals.
- Integrated Nutritionix API to retrieve nutrition data for food items, enhancing the macros logging feature.
- Employed React Hooks (useState, useEffect) for efficient and scalable component state management.
- Utilized React Router for seamless navigation and Material UI for UI styling.
- Leveraged additional tools such as Date-fns for streamlined date manipulation and Axios for HTTP requests, optimizing data handling and user interaction within the application.

**Titanic Survival Prediction — Machine Learning Model:**

11/2023

- Designed and compared the performance of three machine learning models—Random Forest, Support Vector Machine (SVM), and Multi-Layer Perceptron (MLP)—for predicting Titanic passenger survival.
- Utilized feature importances from tree-based models for insights.
- Conducted hyperparameter optimization to achieve 84% classification accuracy.
- Emphasized maintainability by using pipelines and scalable preprocessing techniques.

## TECHNICAL SKILLS

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**Programming Languages:** Python, JavaScript, SQL, R, HTML5, CSS, C, C++, Java, Linux

**Tools/Technologies:** React.js, Node.js, MongoDB, AWS Lambda, AWS Cost Management, Material UI, Pandas, Numpy, Git, Postman, PostgreSQL, Agile