

# HARSHINI BHARANIDHARAN

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## EDUCATION

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

GPA: 3.9/4

Amherst, MA

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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**Ascendion, Intern**

*Basking Ridge, NJ, 06/2024 - 08/2024*

- Utilized **GenAI to automate source-to-target data mapping**, improving efficiency and accuracy in data transformation processes.
- Developed an automated pipeline that generated target tables from source data, leading to a **30% reduction in manual data processing time**.
- Created interactive visualizations using **Plotly and NetworkX to map and display data transformations**, enhancing understanding and communication of data flows.
- Generated comprehensive summary reports using **LangChain and OpenAI API**, facilitating easy replication and understanding of the data mapping process.

**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%.

## 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 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, LangChain, Streamlit, OpenAI API