# Isita Polamarasetti

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## Education

**Rice University** 08/2023 - 05/2025
Master's in Computer Science ***GPA: 3.6 / 4.0***

**Gitam University** 06/2019 - 04/2023
Bachelor of Technology in Computer Science and Engineering ***GPA: 9.43 / 10.0***
- Consistently awarded a **25%** scholarship each year for academic excellence at Gitam University..

## Experience

**Rice University** 12/2023 - Present

***Teaching Assistant (COMP 543) | Grader (Comp 502)*** *Houston , TX*

- Collaborated with **Professor Christopher Jermaine** to provide personalized support during office hours for the course **'Grad Tools and Models for Data Science,'** addressing inquiries, guiding on assignments, and managing grading responsibilities with constructive feedback. Additionally, served as a Grader for **'Neural Machine Learning I (Comp 502)'** under **Erzsébet Merényi.**
- Assisted students in mastering data science tools, including relational database systems, Hadoop MapReduce, Apache Spark, TensorFlow, fostering a comprehensive understanding of data manipulation techniques.

**Footsteps LLC (Amazon DSP)** 02/2023 - 07/2023

***Software Engineering Intern (Remote)*** *California, USA*

- Used statistical modeling, machine learning, including LOF and gradient boosting, to derive actionable insights from extensive Amazon driver data, leading to an **11%** cut in delivery times and a **13%** boost in fuel efficiency.
- Developed advanced automation solutions to optimize operations on the Amazon logistics website. Integrated APIs to automate operations, and designed custom scripts, saving **21** hours per week in manual data entry and reduction in errors considerably.
- Leveraged OpenStreetMap API to develop a logistics website with React, JavaScript, SCSS, and Node.js, embedding dashboards that boosted operational efficiency by **33%** and significantly enhanced weekly bonuses through improved delivery tracking.

**Pharmapro Tivra Health LLP** 10/2022 - 07/2023

***Data Science Intern (Remote)*** *Mumbai, India*

- Implemented NLP classifiers and matchers for complex biomedical clinical trial data, achieving a **35**% notable increase in accuracy through the application of machine and deep learning algorithms like Token-based Matching and Bert.
- Created interactive dashboards and data-driven applications with database connectivity using tools such as Tableau and Python libraries to visualize insights related to medical specialties, detailing the distribution of specialized doctors across states and cities in India, their experience, demographics and other factors.
- Orchestrated integration of healthcare APIs from industry-leading sources like **nih.gov.in** and **credihealth.com** to automate extraction of structured medical data, resulting in a **50%** improvement in data acquisition speed and accuracy.

**University of Illinois Urbana Champaign** 06/2022 - 02/2023

***Research Intern (Remote)*** *Illinois, USA*

- Under Professor **Ashish Khandelwal's** guidance, drafted Jupyter Notebooks for machine learning coursework .Executed precise data scraping using Python libraries like Selenium and Tweepy. Applied web automation techniques for extracting structured data from online sources, ensuring utmost accuracy and reliability.
- Engaged in various NLP-driven projects, demonstrating proficiency in text analysis tasks.Conducted comprehensive sales data analysis and addressed class imbalances by applying advanced techniques to mitigate skewed class distributions, enhancing the accuracy and reliability of predictions.

## Projects

- **Efficient Hashing Using Huffman Coding (COMP 582 Project):** Introduced an innovative integration of hashing and Huffman coding to enhance data manipulation efficiency and optimize space utilization by **47%**. Demonstrated proficiency in advancing hashing techniques, resulting in a substantial reduction in memory usage for HashMaps through extensive research and algorithm implementation.

- **GradHub - Mentorship Initiative & Grad School Predictor:** Architected GradHub with React and Node.js, fostering connections between high school students and college mentors for personalized guidance. Built the Grad School Predictor using Flask API and machine learning, predicting grad school admission likelihood based on academic metrics.

- **Analyzing Deep Learning Models Performance in Detecting Brain Cancer:** Utilized deep learning models, including Inceptionv3, ResNet50, and VGG, to achieve a **97.79%** accuracy in brain tumor detection using MRI images, potentially enabling faster and more accurate diagnoses for improved patient outcomes.

## Skills

**Languages:** Python, JavaScript, Typescript, Matlab
**Web Development:** React.js, HTML, CSS, Node.js, jQuery, Bootstrap, REST, MVC
**Data Science** NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Keras, NLTK, Spacy, OpenCV, Matplotlib
**Databases:** MySQL, PostgreSQL, NoSQL
**Tools/Platforms:** GIT, Linux, Pytest, BeautifulSoup, Selenium, Hadoop, Docker, Tableau, CI/CD, AWS, Microsoft Tools