

Gayathri Baman

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SUMMARY

Enthusiastic and innovative software engineer with 2+ years of experience in full-stack development, modern languages. Adept at creating scalable, fault-tolerant solutions for dynamic environments. Ability to optimize code, enhance system performance, and articulate with cross-functional teams in an agile environment.

EDUCATION

University of North Texas, Denton TX

Masters in Computer Science

Aug 2023 - May 2025

CGPA - 3.7/ 4.0

SNIST Hyderabad, India

B.Tech in Computer Science & Engineering

Jul 2017 - May 2021

CGPA - 8.6 / 10

SKILLS

- **Languages:** Python, Java, C++, C#, JavaScript, R, PHP, Bash.
- **Web & Application Development:** React Native, Node.js, Angular, HTML/CSS, MVC, Scalable Web Applications, Full Stack Development, Web Development.
- **Machine Learning & AI:** TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas, Seaborn, Information Retrieval, Software Development for AI, Big Data & Data Science
- **Cloud & Distributed Systems:** AWS, Terraform, Docker, Apache Tomcat, Windows, Linux, Distributed Systems, Distributed Computing, Distributed Storage, Cloud Computing.
- **Databases:** MySQL, SQL Server, NoSQL, Elasticsearch, Relational Databases, Distributive Parallel Databases.
- **Tools & DevOps:** GitHub, Jenkins, Jira, Confluence.
- **Visualization & Reporting:** Tableau, Power BI, Kibana, Scientific Data Visualization.
- **Systems & Operating Environments:** Real-Time Operating Systems, Object-Oriented Design & Programming, Computer Engineering.
- **Soft Skills & Methodologies:** Critical Thinking, Problem Solving, Team Collaboration, Data Structures & Algorithms, Modern Languages.

WORK EXPERIENCE

Software Development Engineer | Abjayan| Hyderabad, India

Apr 2021 – July 2023

- Enhanced **product performance** by using **Elasticsearch & AWS**, boosting **search results** by **35%** and **cutting downtime** by **20%**.
- Remolded Impresa CX with **React Hooks** and **React Native** resulted in a 25% boost in customer acquisition and a 30% increase in user satisfaction.
- Created **technical documentation** via **NodeJS**; improved system implementation efficiency by **40%**; reduced **release time** by **20%**

INTERNSHIP EXPERIENCE

ML Project Intern | The International Institute of Information & Technology, Hyderabad, India

June 2019 – July 2019

- Using **support vector machines** and the **random forest algorithm**, the study evaluated the probability of chickpea extinction by 2070 and found a **30% decrease** in sustainability to guide agricultural actions.

PROJECTS

Credit Card Fraud Detection | University of North Texas, TX

Jan 2024 - Feb 2024

- Employed by **PyTorch** and **Pandas** for data preparation, the improvised credit card fraud detection system code produced an output with an **accuracy rate of 49.8%**.
- Enhanced detection **accuracy by 15%** as a result of better data management and efficient manipulation using advanced feature selection algorithms and Seaborn visualization.

E-commerce Platform Development | University of North Texas, TX

Jan 2024 - May 2024

- Created a database system and e-commerce platform with **JavaScript**, increasing **user engagement by 25%** with responsive design and optimized database queries.
- Optimized the payment process with **React.js**, reducing **cart abandonment by 30%** and increasing **conversion rates by 20%** through real-time inventory management and seamless **payment integration**.

Real-Time Video Anomaly Detection | University of North Texas, TX

Aug 2024 - Dec 2024

- Built a real-time human detection system using **ROS 2**, **YOLOv8**, and **Python**, achieving **92% accuracy** with dynamic frame rate control to maintain **100ms latency**.
- Integrated **OpenCV**, **rcipy**, and **cv_bridge** to ensure **100% responsiveness**, auto-adjusting from **30 FPS to 15 FPS** during deadline misses.

Analysis of Public Chess | University of North Texas, TX

Aug 2024 - Dec 2024

- Analyzed **1M+ Lichess.org** games using **Python** and **Tableau**, improving identification of winning strategies by **35% across openings and ratings**.
- Automated **PGN-to-CSV** data pipeline in Colab, **accelerating feature extraction by 80%** for move trends, win rates, and game

outcomes.

Solar-Net: Transformer Based Solar prediction | University of North Texas, TX

Aug 2024 - Dec 2024

- **Engineered ML pipeline** with **scaling, feature selection, and outlier removal** (z-score < 3); achieved **74.77% R^2** with SVR, improved prediction accuracy by 21% vs. baseline.
- **Applied seaborn/Plotly** for correlation analysis; **trained SVR, RF, GBM, LSTM, Transformer models on 80:20 split**; hyperparameter tuning via **GridSearchCV** boosted performance by **18%**.