Gayathri Baman

bgayathribaman@gmail.com | Bellevue, WA | (206)-619-8010 | https://www.linkedin.com/in/gayathri-baman-435713169/ | https://github.com/BamanGayathri

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 **Aug 2023 - May 2025**
Masters in Computer Science **CGPA - 3.7/ 4.0**
SNIST Hyderabad, India **Jul 2017 - May 2021**
B.Tech in Computer Science & Engineering **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.
- **Operating Systems:** Real-Time Operating Systems, Object-Oriented Design & Programming, Computer Engineering.
- **Methodologies:** Critical Thinking, Problem Solving, Team Collaboration, Data Structures & Algorithms, Modern Languages.

Work Experience

Software Development Engineer | Abjayon| 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**, rclpy, 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.

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%**.