Bharadwaj Guntaka

+91 8978878833 • bharad0007@gmail.com • Vijayawada, India 520013 • **WWW:** [Bold Profile](#)

Summary

As a dedicated R&D Engineer, I possess extensive experience in designing, analyzing, and implementing algorithms to solve complex problems efficiently. My background includes a deep understanding of data structures, algorithmic techniques, and mathematical concepts, allowing me to tackle challenging problems and deliver optimized solutions.

Skills

- Competitive Programming
- Algorithms and Data structure
- Mathematics
- ASP DOTNET CORE
- ASP DOTNET MVC
- Window Presentation Form(WPF)
- C#
- C++
- Python
- Java script
- Google Firebase
- AI & ML
- Oracle Database
- MYSQL
- Design Optimization
- Rest API
- Problem Solving
- Time Management
- Team Work

Experience

02/2025 - Current
Software Engineer, **Hexagon**, Hyderabad, India
Smart 3D Modernization & Feature Development (C#/.NET, WPF)

- Modernized Smart 3D workflows by enhancing the **Deliverables** tab to support **seamless creation of drawing volumes**.
- Designed and implemented **command-to-command** communication between Space Creation and Drawing Component commands, significantly improving user productivity and reducing manual steps.
- Developed a **shared command framework** for the **Report Format Designer**, enabling a **single common command** to be used across both **classic Smart 3D (32-bit)** and **modern Smart 3D (64-bit)** platforms, improving maintainability and reducing duplicate implementation efforts.
- Contributed to core product enhancements in **C#** and **WPF**, ensuring robust integration with existing 3D modeling and deliverables generation features.

06/2023 - 11/2024
Research and Development Engineer, **Efftronics**, Mangalagiri, India

- **NMDL(Network Monitoring Data Logger):**
This Software is used as bridge for receiving incoming packets that are created by the Data logger through TCP , UDP and Serial Port Communication which are passed through a state machine which is used to determine the functionality of the packet and store them in a database.
This project helped me to understand various communication models and also helped me to gain experience working with various kinds of databases such as MYSQL.ORACLE,POSTGRESSQL. it also helped me to build strong foundations in data structures.

- **Fault logic :**

This project was developed to identify Fault (error) behaviors in various railway assets (i.e point,signal,track). My role in this project is to analysis point machine behavior and develop an algorithm for the point machine such that it is fail safe and capture un-wanted behaviors in the point machine which is used to send as a notification for the railway administrators.
I used graph algorithms to solve the problem and implemented in C# programming language

- **PHMU(Point Health Monitoring Unit):**

This project is used for analyzing current signatures of a point machine . This data are then used to train a ML Models(I,e SVM,XGBOOST,RANDOM FOREST)which undergo a voting mechanism to predict the behavior of the point machine.
this project helped me to gain deeper understanding and working of ML MODELS under the hood

- **SCREEN SAVERS FOR WINDOWS:**

I created few windows screen savers based on L-SYSTEMS which uses recursion to create beautiful fractal patterns and then animated those structures.
This project helped me to understand the concept and applications of recursion in a practical and a playful way.

Education And Training

04/2023
B.TECH, Computer Science
NRIIT, AP, India

- **Professional Development Courses:**
- Mathematics for Computer Science ; MIT OPENCOURSEWARE
- Introduction to Algorithm and Data Structure ; MIT OPEN COURSEWARE
- **Academic Achievements and Honors:**
- Specialist in Codeforce, Atcoder platform using C++
- Winner of College level Essay Competition
- Winner of College level Programming Contest using C++
- **Projects and Research:**
- BROX : This project was an Online Chatting Website which you can talk to Random Strangers while watching Youtube simultaneously . I used Javascript and Google Firebase to develop this website.
- **Hobbies**
- PLAYING GO
- SOLVING PUZZELS
- SOLVING MATH AND COMPUTER SCIENCE PROBLEMS