

# Bhuvaneshwari Kapuluru

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## SKILLS

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**Languages:** C++ , Python , C , HTML , CSS , JavaScript , SQL ( MySQL )

**Technical Skills:** Data Structures and Algorithms ( DSA ), Object Oriented Programming ( OOP ) , System Design , Operating System , Database Management Systems ( DBMS ) , Computer Networks , Version Control , Web Development , Compiler Design , Unit Testing ( Pytest ), Python Hypothesis testing

**Frameworks:** React , Bootstrap

**Libraries:** C++ STL , Pygame , Pandas , SQLAlchemy

**Developer Tools:** Git, Gitea , Visual Studio Code, MS Excel , MS Word , MS Powerpoint

## EXPERIENCE

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### Python Developer Intern

December 2024 – March 2025

*Sixth Energy Technologies (Paid Internship)*

*Bangalore, India*

- **Skills Used:** Python, Git/Gitea, Unit Testing (Pytest), SQLAlchemy ORM, Python Sockets, Pandas, YAML, SDLC, Agile, Data Aggregation, Code Review, Version Control.
- Engineered core modules of **Guardian Server Monitoring**, a high-reliability backend platform that continuously monitors CPU and memory usage, cron schedules, thermal conditions, network throughput, power backup, and service uptime for mission-critical infrastructure.
- Completed rigorous foundational training in **Python**, advancing through decorators, generators, file I/O, exception handling, and functional paradigms to write modular, efficient, and production-ready code.
- Led migration from Git to **Gitea**, mastering CLI workflows including **commit**, **push**, and advanced branching operations such as **squash**, **drop**, and **merge** for streamlined version control and CI compatibility.
- Delivered **10+ production-grade pull requests** with peer-reviewed, high-impact contributions across critical features and bug resolutions, reflecting strong code hygiene, testability, and ownership.
- Integrated robust **unit testing pipelines** using **Pytest** and **Hypothesis** to simulate edge cases, validate business logic, and ensure reliability of time-sensitive modules like cron evaluators.
- Developed bi-directional server communication using **Python Sockets** and **SQLAlchemy ORM**, enabling secure, scalable query handling and seamless real-time data synchronization.
- Architected configuration validators for server attributes such as geo-location, IP mappings, and connectivity protocols using **structured JSON parsing** and fault-tolerant validation logic.
- Leveraged **Pandas** to perform time-series log aggregation, data transformations, and statistical summaries for operational dashboards; incorporated **YAML** to manage scalable and reusable service configs.
- Exhibited comprehensive SDLC knowledge through active involvement in backend design, testing automation, debugging, deployment, and cross-functional collaboration within an Agile workflow.

### Open Source Contributor (Top 20 of 17,000+ contributors )

October 2024 – November 2024

*Girl Script Summer Of Code ( Gssoc 2024 )*

*Remote*

- **Skills Used:** Git , GitHub , Python , JavaScript , HTML , CSS , React , Google Maps API , Visual Studio Code
- Contributed to **75+ pull requests** across diverse open-source projects, all successfully merged into production.
- Ranked among the **Top 20 contributors** out of 17,000+ global participants in a major open-source program.
- Recognized as a **Top Contributor** with official certification and awarded exclusive **goodies** for outstanding performance and commitment throughout the program.
- Improved the UI of **SwapReads**, a book recommendation platform, by implementing **flipping cards** for books.
- Curated and added a list of **Top 10 Indian authors and books**, enriching content discovery , personalization.
- Integrated quizzes into book cards to enhance user engagement and interactivity on the SwapReads platform.
- Worked on **BuddyTrail**, a tourism assistant web app, by integrating the **Google Maps API** to display curious tourist places and Added location-based features to show nearby hotels with contextual search functionality.
- Implemented **click-to-call** functionality in BuddyTrail to connect users with local services .
- Enhanced a **Master Web Development App** by developing modular components and creating interactive quizzes on **HTML, CSS, and JavaScript** to reinforce learning and engagement.
- Collaborated effectively with maintainers and fellow contributors using **Git-based workflows**, PR reviews, community discussions, and issue tracking systems.
- Followed standard open-source contribution workflows by forking repositories, cloning via **Github**, implementing changes using **Visual Studio Code**, and submitting pull requests after peer review and testing.

## PROJECTS

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### CppREPL - Interactive C++ Read-Eval-Print Loop [GitHub]

June 2020 – Present

- **Skills Used:** C++, Recursive Descent Parsing, Expression Evaluation, Symbol Table, Command Error Handling
- Developed **cpprepl**, a custom C++ Read-Eval-Print Loop (REPL) with support for mathematical expression evaluation, variables, and functions in a lightweight scripting environment.
- Designed and implemented a **recursive descent parser** with operator precedence, enabling the evaluation of arithmetic expressions, and built a **custom interpreter engine** with a symbol table for runtime management.
- Created a **modular command dispatcher** supporting REPL-specific commands (e.g., **save**, **load**, **clear**, **vars**) for efficiently managing session state, user interaction, and dynamic command processing.
- Implemented a robust **error-handling system** to catch syntax, lexical, and runtime errors, providing clear and descriptive feedback to prevent interpreter crashes, improving overall user experience and reliability.
- Structured the project using well-defined architectural layers: **Lexer**, **Parser**, **Evaluator**, and **Environment**, demonstrating strong knowledge of systems programming, compiler theory, and maintainable software design.

### LeetCode Genie - ChatBot For Leetcode Solutions[GitHub]

June 2020 – Present

- **Skills Used :** C++, Python, Socket Programming, Multithreading
- Developed a **real-time chatbot** that provides **LeetCode problem solutions with explanations** and learning resources , Preparation tips , Roadmaps of **DSA** through **client-server communication**.
- Implemented **socket-based communication** for **real-time interaction** between **client** and **server**.
- Utilized **multithreading** to handle **multiple user queries concurrently**, ensuring a smooth user experience.
- Optimized the **backend** using efficient **data structures** like **unordered map** for quick solution lookups
- Designed and deployed an intuitive **chatbot interface** to assist users in finding **Leetcode solutions** .

## EDUCATION

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### Sri Padmavati Mahila Visvavidyalayam (SPMVV)

*B.Tech in Computer Science*

Tirupati, AP

*December 2021 – April 2025*

### Sri Prathibha Junior College

*Senior Secondary (MPC)*

Sullurpet, AP

*June 2019 – May 2021*

### VSSC Holy Cross High School

*Secondary School*

Sullurpet, AP

*June 2018 – March 2019*

## ACHIEVEMENTS

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**Girl Script Summer of Code (GSSoC 2024):** Secured **Top 0.1% rank** among 17,000+ participants by contributing to various open-source projects, adding **innovative features**, and **optimizing codebase performance efficiently**.

**GeeksforGeeks:** Ranked **Top 0.1%** in Institution by solving **350+ DSA problems**, consistently demonstrating advanced problem-solving and exceptional analytical skills, **optimizing solutions efficiently**.

**LeetCode:** Earned the **100 Days Badge** for consistent problem-solving and coding discipline, solving a wide range of algorithmic and data structure problems, including **edge cases**.

**Open-Source Contributions:** Contributed over **75 pull requests** across multiple projects, with a focus on enhancing UI/UX, improving functionality, fixing **critical bugs**, and **optimizing performance and reliability**.

**HackerRank:** Achieved **4-star rating** in C++ problem-solving, highlighting expertise in algorithms, dynamic programming, graph theory, and **optimizing time complexity** across challenges.

## POSITIONS OF RESPONSIBILITY

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**Team Lead for Final Institution Project:** Led a team of 4 members in building the project, **assigning tasks based on team strengths**, tracking progress, and ensuring **timely completion** of all key project milestones successfully.

**Speaker of Institution:** Acted as a key liaison between ministers and students, ensuring smooth communication, **conflict resolution**, fostering a positive collaborative environment, and enhancing **team efficiency**.

**Education Minister:** Organized engaging technical quizzes, daily news reading sessions, and **awareness programs** to promote academic growth, collaboration, leadership skills, and overall student engagement.