

# BALAJI PATIL

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[balajipatilportfolio.netlify.app](http://balajipatilportfolio.netlify.app) | Pune, India

## Education

### VIT Bhopal University

Bachelor of Technology in Computer Science, CGPA: 8.40/10.0

2022 – 2026

Bhopal, India

## Professional Experience

### Software Development Intern

Hashtokens

Oct 2025 – Present

Remote

- Architected and deployed Endpoint Data Management System using React Vite, reducing API documentation time by 60% through intelligent metadata organization and tagging system
- Automated performance testing workflows using Python scripts, decreasing manual testing effort by 75% and improving system reliability to 99.5% uptime
- Applied CAP theorem principles to architect distributed system achieving optimal consistency-availability balance under network partition scenarios

## Projects

### Secure Military Communication System | C, Data Structures, Encryption Algorithms, File I/O Nov 2024 – Present

- Engineered a secure terminal-based messaging system implementing XOR encryption/decryption algorithms for military-grade communication security
- Developed user authentication system with audit logging capabilities, ensuring secure access control and communication trail for defense applications
- Implemented structured data handling using C structs and file operations, processing encrypted messages with hexadecimal encoding for enhanced security
- Designed modular architecture with separate encryption, authentication, and logging modules demonstrating strong system design principles

### Radar Simulation and Threat Detection System | C, Algorithms, Data Structures, Simulation Nov 2024 – Present

- Built real-time radar simulation system capable of tracking multiple targets with distance, bearing, and speed calculations using mathematical algorithms
- Implemented threat detection algorithms analyzing target parameters (distance, speed, type) to identify potential threats with configurable security levels
- Developed multi-target tracking system using arrays of structures, handling up to 10 simultaneous targets with real-time threat assessment capabilities
- Created alert generation system for high-priority threats with comprehensive logging and system status monitoring for defense applications

## Technical Skills

**Programming Languages:** C, C++, Python, SQL, JavaScript, HTML, CSS

**C Development:** Data Structures, Algorithms, Memory Management, Pointers, File I/O, Multi-threading

**Frameworks & Libraries:** React, Vite, Flask, Pandas, NumPy, Scikit-learn, Bootstrap

**Data Analytics & BI Tools:** Power BI, Tableau, Excel, Advanced DAX, Statistical Analysis, Predictive Modeling

**Tools & Technologies:** Git, REST APIs, ETL Pipelines, Data Visualization, Machine Learning, Distributed Systems

**Soft Skills:** Problem Solving, Data Storytelling, Stakeholder Communication, Cross-functional Collaboration, Adaptability

## Certifications & Achievements

**Google Data Analytics Professional Certificate** – Coursera (2024)

**LeetCode:** Solved 500+ algorithmic problems (300+ in C/C++) demonstrating strong problem-solving capabilities

**HackerRank:** Achieved 5-star rating in C and C++ programming

**C Projects Portfolio:** Developed 10+ systems programming projects including defense simulations and secure communication systems

**Power BI Portfolio:** Developed 10+ interactive dashboards with dynamic charts, KPIs, and real-time reporting