

# PUSHKAR SINGH

Harirajpur, Puri, Odisha, 752050, India

+918596007091 [Email](#) [Portfolio](#) [Github](#) [LinkedIn](#)

## Education

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### XIM University

Bachelor of Technology (Hons.) in Computer Science & Engineering

July 2024 – May 2028

Bhubaneswar, Odisha

## Open Source Contributions

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### Git (C, Shell, Systems Programming)

Jan 2026 - Present

Remote

[Patches](#)

- Contributed to the Git project by submitting patches to improve test infrastructure, documentation, and core functionality, with multiple patches merged into the upstream repository.
- Refactored internal functions (e.g., `normalize_path_copy_len`) to improve readability while preserving behavior, following strict code review guidelines.
- Fixed real-world issues such as incorrect `--prefix` validation in `git subtree split`, adding regression tests and iterating through multiple patch versions based on maintainer feedback.
- Actively participated in Git mailing list discussions, reviewing patches, providing feedback, and following a review-driven development workflow using `git send-email`.
- Proposed enhancements to the `git repo` command (RFC) to improve repository metadata access, including design discussions around path handling and structured output.

### Mozilla Firefox (JavaScript, Mercurial, DevTools)

Mar 2026 - Present

Remote

[Patch](#) | [Bug](#)

- Contributed to Mozilla Firefox DevTools by fixing an issue where browser-level keyboard shortcuts (e.g., reload) were incorrectly blocked when the WebSocket message list was focused.
- Modified event handling logic in `MessageListContent.js` to ensure `preventDefault` and `stopPropagation` are only applied to navigation keys, preserving expected browser behavior.
- Designed and implemented automated tests in the Netmonitor WebSocket suite to validate correct keyboard shortcut propagation and prevent regressions.
- Worked within Mozilla's Phabricator-based review workflow, iterating on patches based on reviewer feedback and improving test reliability and coverage.
- Debugged asynchronous DevTools test failures and race conditions using `mach` and `moz-phab`.

## Projects

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### Flossum CLI Library | *Node.js, JavaScript, NPM*

Live | Demo | GitHub

- Developed a **terminal animation library** for CLI applications, focused on improving **developer experience**.
- Designed as a reusable **npm package** with **modular architecture** for extensibility.
- Implemented **customizable animations** and optimized output rendering for terminal environments.

### Otto Browser Extension | *TypeScript, React, Manifest v3*

Demo | Live | GitHub

- Built an **AI-powered browser extension** to analyze and simplify **Terms & Conditions**.
- Implemented using **React** and modern **browser extension APIs (Manifest v3)**.
- Focused on **real-world usability** by extracting and summarizing complex policy content.

### snake8086 | *Assembly, emu8086*

Demo | GitHub

- Implemented the classic Snake game using **8086 Assembly language**.
- Handled **low-level memory operations** and instruction control for game logic and rendering.
- Strengthened understanding of **computer architecture** and **systems-level programming**.

## Achievements

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- Global Nominee** at NASA International Space Apps Challenge 2025 (selected among top global teams)
- 2nd Prize Winner** in PythonVerse 2025 (competitive coding event)

## Technical Skills

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**Languages:** C, C++, Java, Python, JavaScript, TypeScript, Shell Script

**Tools:** Git, Docker, Linux, VS Code

**Technologies:** React, PostgreSQL, Node.js, REST APIs, Cloud Basics