

# Aranya Dutta

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## Technologies

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**Languages:** C++, C, Java, Python, JavaScript

**Technologies:** Git, GitHub, GitHub Actions, IntelliJ IDEA, Linux

## Projects

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### MiniDB (C++ • DSA • Systems)

[github.com/thisisaro/MiniDB](https://github.com/thisisaro/MiniDB)  
🔗

- Designed core data structures like B-Trees, hash maps, and vectors for a lightweight database engine supporting SQL-like queries.
- Implemented indexing, memory paging, and a query processor using recursion and custom parsing techniques.
- Tools Used: C++, STL, MFC

### KernelTalk (C • Linux Kernel • IPC)

[github.com/thisisaro/KernelTalk](https://github.com/thisisaro/KernelTalk)  
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- Created a terminal-based chat system using a custom Linux kernel module, enabling user-space communication via character devices.
- Designed a simple producer-consumer model using blocking/non-blocking I/O, showcasing low-level IPC and device driver programming.
- Tools Used: C

## Experience

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### Open Source Contributor

Remote June 2024 – Present

*Processing Foundation – Processing 4*

- Contributed to the open-source development of Processing 4, a creative coding environment in Java used by artists and educators.
- Improved performance, fixed issues, and submitted pull requests that enhanced documentation and stability.
- Tools Used: Java, GitHub, Gradle

### Competitive Programmer & Core Member

Bhubaneswar, India Dec 2023 – Present

*KodeWreck (Competitive Coding Club)*

- Actively solve problems on platforms like Codeforces and GeeksforGeeks, continuously improving algorithmic thinking and speed.
- Current Codeforces Rating: **1234 (Pupil)** — [View Profile](#) 🔗
- Solved 450+ problems on GeeksforGeeks — [Profile Link](#) 🔗
- Improved problem-solving efficiency by over 200% through consistent practice and peer learning.

## Achievements

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- Secured **2nd Runner-up** at ICDCIT Hackathon 2024 among 100+ participating teams.

## Education

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### Kalinga Institute of Industrial Technology

August 2023 – May 2027

*B.Tech in Computer Science*

- GPA: 7.8/10.0
- **Coursework:** Data Structures and Algorithms, Operating Systems, Database Management Systems