

Prajwal Banakar

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EXPERIENCE

The Apache Software Foundation (Apache Fluss)

May 2026 – Aug 2026

Google Summer of Code Contributor

Remote

- Authored FIP-37 (Native RoaringBitmap Integration), accepted by community vote, shipped in Apache Fluss 1.0.
- Delivered 12 RoaringBitmap SQL functions natively in FlussCatalog, removing the external UDF JAR dependency.
- Fixed a priority=critical catalog validation bug blocking the Apache Fluss 1.0 release.
- Functions ship in Apache Fluss 1.0, now running in production at Alibaba, Ant Group, Cisco Webex, and Fresha.

Springer Capital

Jan 2026 – April 2026

Software Engineer Intern

Remote

- Built 15+ REST API endpoints and JWT-based authentication flows using Java and Spring Boot for a FinTech payment reconciliation platform handling 5k+ daily records.
- Designed relational schemas and integrated backend services end-to-end with Spring Data JPA and PostgreSQL.

OPEN SOURCE

Apache Fluss — Streaming Storage for Real-Time Analytics | Contributor github.com/apache/fluss/pulls

- 25+ pull requests merged, 7,000+ lines of code contributed across core engine, Flink connector, and documentation.
- Built fluss-docgen: a new module that automates ConfigOptions documentation generation.
- Credited contributor in Apache Fluss v1.0 and v0.9.0 official releases.
- Diagnosed and fixed a shaded-JAR classloader bug affecting RoaringBitmap functions in production.
- Verified Apache Fluss v1.0 and v0.9.0 release artifacts and cast community non-binding +1 votes.
- Ranked in the **top 25 contributors** to Apache Fluss out of 170+ contributors.

PROJECTS

DistLimit — Distributed Rate Limiter | Java, Redis, Concurrency, Docker github.com/pbanakar/distlimit

- Built Token Bucket and Sliding Window limiters with pluggable `Clock` injection for deterministic sub-second tests.
- Eliminated check-then-act race conditions using `ConcurrentHashMap` and fine-grained per-client synchronized locking.
- Achieved atomic state updates via Redis Lua scripts, validated with 50-thread Testcontainers integration suites.
- Enforced consistent rate limits across 3 JVMs behind Nginx in k6 load tests with configurable fail-open resilience.

HuntLog — Job Application Tracker | Java, Spring Boot, Spring Security github.com/pbanakar/huntlog

- Engineered a RESTful service with an $\mathcal{O}(1)$ state machine to enforce valid hiring lifecycle transitions.
- Implemented stateless JWT authentication and salted BCrypt hashing with strict per-user data isolation.
- Built user analytics with JPA projections and verified endpoints via Testcontainers and Docker Compose.

TECHNICAL SKILLS

Languages: Java, SQL, C++

Distributed Systems: Apache Fluss, Apache Flink, Stream Processing, Distributed Storage

Backend: Spring Boot, Spring Security, Hibernate, RESTful APIs

Databases: MySQL, PostgreSQL

DevOps & Tools: Git, GitHub, Docker, Maven, GitHub Actions, Linux, Redis

Concepts: OOP, Exception Handling, Multi-Threading, Collections Framework, System Design

EDUCATION

Ghousia College of Engineering, VTU

Bachelor of Engineering in Information Science | CGPA: 7.5

Ramanagara, Karnataka

Dec 2022 – June 2026