

Database Engineering & PostgreSQL

Schema design, indexing, query optimization, migrations, and managing production databases under load.

blootou.com | sales@blootou.com

Program Overview

PRICE

\$3,350

DURATION

6 weeks

FORMAT

Hybrid

LEVEL

Intermediate

Schema design, indexing, query optimization, migrations, and managing production databases under load. This professional track is structured for adult learners who need practical, career-relevant depth without academic abstraction. Delivered as a hybrid experience, the course combines guided milestones, implementation reviews, and applied exercises aligned with modern AI, engineering, and technical leadership work.

Outcomes

- Design schemas that balance flexibility, integrity, and performance.
 - Optimize queries and indexes for production workloads.
 - Plan safe migrations and operational database changes.
 - Diagnose database bottlenecks using evidence instead of guesswork.
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Includes

- 6 hybrid weeks of database modeling and optimization labs.
 - PostgreSQL tuning worksheets and migration templates.
 - Indexing and explain-plan practice sets.
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- Production incident case studies for data systems.

Syllabus

WEEK 1

Schema Design for Production

Model data structures that stay durable as products and teams evolve.

Topics: Normalization, Constraints, Relational tradeoffs

WEEK 2

PostgreSQL Query Mechanics

Understand how PostgreSQL executes queries and why some patterns degrade.

Topics: Query planning, Joins, Aggregations

WEEK 4

Indexing and Performance

Choose and evaluate indexes based on real workloads and explain plans.

Topics: B-tree and composite indexes, EXPLAIN, Performance tuning

WEEK 6

Migrations and Operations

Ship schema changes safely while protecting data quality and uptime.

Topics: Migration strategy, Backups, Operational playbooks

Instructor

Priya Nair

Priya is a data infrastructure architect focused on resilient PostgreSQL systems, query performance, and operational excellence.

This Blootou Intelligence syllabus is an admissions overview for planning and evaluation. Final cohort dates, live session timing, assessments, and platform access details are shared in the welcome packet after enrollment.

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