Engineer Data

{ Database Design & Modeling }

Somewhere sensible to keep your data

A structure that matches how the business actually works, so the questions you need answered later are still possible to ask.

Still working out what you need?

Tell us what is going wrong, or what you are trying to build. We will tell you what it would take, roughly what it would cost, and whether we are the right people for it.

From 1,400 DKK an hour, excluding VAT — and less per hour on a longer booking.

Get in touch See what it costs

Selected work demonstrating this service.

Turn the service into a result

Make “Database Design & Modeling” serve a business outcome. We can connect the technical work to the users, operations and decisions it needs to support. A structure that matches how the business actually works, so the questions you need answered later are still possible to ask.

Get in touch

Examine the relevant work

Use the related work on this page to examine our approach. Ask about the tradeoffs and the conditions behind each result. Designed and ran 6 ETL/ELT pipelines — 6 ETL pipelines across three database engines

Designed and ran 6 ETL/ELT pipelines Get in touch →

Designed and ran 6 ETL/ELT pipelines

Designed, implemented, and administered 6 ETL/ELT pipelines, utilizing Google BigQuery, MSSQL, PostgreSQL, Shell scripting, PL/pgSQL, and Transact-SQL, integrating data for efficient Python API processing.

Ran 100 PostgreSQL, MS SQL, BigQuery warehouses

Architected, created, and managed 100 PostgreSQL, MS SQL, and Google BigQuery data warehouse databases with primarily GIS and time-series data, optimizing performance and scalability.

A maritime platform with clear system boundaries

Architected a layered maritime platform separating a Next.js PWA frontend, a Go (Huma/Fiber) API, and a PostgreSQL function layer, keeping all business logic in the database.

Designed a JSON passthrough from Postgres to API

Designed a JSON passthrough architecture where PostgreSQL functions return complete JSON forwarded verbatim by the Go API, eliminating intermediate unmarshalling and decoupling the frontend from schema changes.

Designed a function-first PostgreSQL data layer

Designed a PostgreSQL function-first data layer — 1,275 stored functions across 34 schemas — so every read and write goes through a function the database can grant, rather than through a table.

Time-ordered keys for a growing data model

Adopted UUID v7 time-ordered identifiers (PostgreSQL 18) as entity keys to reduce B-tree index fragmentation and speed up queries.

Implemented a catalogue-driven deep-merge

Implemented a catalogue-driven deep-merge for stored JSON preferences, preventing missing-key crashes as the schema evolves.

Modeled 348 tables across 34 Postgres schemas

Modeled the maritime domain into 348 normalized tables across 34 PostgreSQL schemas — professionals, companies, ships, jobs, reviews and the rest — with SMALLINT lookups and UUID v7 keys.

Built Stripe and in-app purchase entitlements

Built the payments and entitlements layer — Stripe alongside Apple and Google in-app purchase — gating the directory, search and export through an 11-table access model checked on the server.

Moved slow work onto a River job queue

Moved slow work off the request path onto a River job queue — 15 worker modules, 8 scheduled tasks and 20 pg_cron jobs — so a request returns while the work behind it carries on.

Built first-party analytics inside PostgreSQL

Built first-party product analytics in PostgreSQL — 47 functions over partitioned event tables that prune themselves — pseudonymised behind a rotating salt and gated on the visitor's consent.

Built a loyalty wallet, leagues and badges

Built the loyalty and reputation system — 67 functions over a 31-table ledger, with leagues, badges and a redemption shop — taking a row lock on the balance to close the double-spend window.

Built the hiring and seafarer career workspaces

Built hiring and seafarer career workspaces; the recorded implementation snapshot contains 151 stored functions across 48 tables for vacancies, applications, certificates, rank progression and sea time.

Built a database-driven CV generator

Built a database-driven CV, references, portfolio and cover-letter generator in Python — 41 modules, 10,580 lines — rendering six output formats from one 23-table SQLite source assembled by a 19-step idempotent pipeline.

Looking for Database Design & Modeling?

Use the linked work to judge relevant experience. Tell us what you need to build; we can discuss the scope, delivery approach and handover.

Get in touch Full portfolio

Scope the work before commissioning it

Bring a representative dataset, the questions it must answer and the current bottleneck. We can agree how to measure quality, throughput and recovery.

See what it costs Get in touch →

Talk through your requirements

Tell us what you need from “Database Design & Modeling”, including the deadline and the team that will maintain it. We can discuss a practical way forward.

Get in touch

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