

Thomas Bonderup

Software Developer | Aalborg, Denmark
+45 22 39 34 91 | tb@tbcoding.dk | LinkedIn | GitHub | Blog

PROFILE

Software Developer with experience building and operating production backend systems in regulated and large-scale environments. Background in distributed systems, data platforms, and secure communication. MSc in Computer Science & Informatics. Proven track record modernizing legacy systems and taking responsibility for complex system migrations, improving reliability, observability, and maintainability across startups and enterprise organizations.

EXPERIENCE

Software Developer (Independent)

Aug 2025 – Present

Self-employed

Aalborg, Denmark

- Delivered a client-facing website working closely with stakeholders through planning, implementation, and launch.
- Designed and built a production-ready IoT gateway reference architecture in Rust, integrating embedded devices with cloud services via MQTT over TLS/mTLS.
- Implemented secure device identity and configuration flows, covering onboarding, configuration management, and lifecycle operations for edge devices.
- Instrumented IoT gateway services with OpenTelemetry and implemented end-to-end observability using Prometheus and Grafana.
- Developed an internal automated system verification platform to assess security, reliability, and observability of distributed edge-to-cloud systems, turning expert reviews into repeatable, executable checks.

Software Developer

Apr 2024 – Jul 2025

Dencrypt A/S

Aalborg, Denmark

- Full-Stack Software Developer in a small, product-focused company specializing in cryptography and secure communication.
- Reduced operational risks by leading modernization of legacy services with a focus on scalability, observability, and maintainability through backend and API refactoring.
- Took ownership of long-running migration initiatives, aligning technical decisions with long-term architectural goals in collaboration with multiple stakeholders.
- Actively contributed to system design discussions, code reviews, and technical decision-making, helping reduce technical debt.
- Initiated and ran a cross-team Cake Club, strengthening internal collaboration and engineering culture.

Software Developer (Data Engineering / DevOps)

Aug 2022 – Jan 2024

Telenor A/S

Aalborg, Denmark

- Software Developer in an application DevOps datalake team supporting large-scale analytics and business intelligence.
- Built and operated data ingestion pipelines handling high-volume datasets for cost optimization and insight generation.
- Worked with Python, SQL, Scala, Spark, cloud platforms, and CI/CD pipelines in a production environment.
- Responsible for system integrations, ingestion design, operational stability, and stakeholder coordination.
- Contributed to code standards, reviews, and release management in a large enterprise setting.

Software Developer (Freelance / Consulting)

Sep 2018 – Dec 2021

TB Coding

Odense, Denmark

- Delivered consulting projects for SMEs and enterprise clients, working directly with stakeholders on requirements, implementation, and delivery.
- Designed and implemented backend systems in Java and PHP, including real-time data processing and analytics-oriented architectures.
- Interviewed and mentored a software developer intern.

Web Developer

Aug 2015 – Sep 2018

TB Coding

Aalborg, Denmark

- Built and maintained 10+ websites, e-commerce solutions, and subscription platforms.
- Developed and scaled affiliate marketing platforms, generating 600,000+ DKK in qualified leads with 13% conversion rate.
- Managed and mentored a software developer, accelerating product delivery timelines.

Chief Technology Officer

Oct 2016 – Apr 2018

Vinoli ApS - acquired by Vinfarmen ApS

Aalborg, Denmark

- Implemented automated subscription billing, reducing customer service load and improving retention.
- Built a wine subscription gift product, increasing early-stage cash flow and accelerating core business growth.
- Owned end-to-end technical delivery in an early-stage startup environment.

EDUCATION

Roskilde University

Feb 2020 – Jan 2022

Master of Science (MSc) in Computer Science and Informatics.

Roskilde, Denmark

University College Lillebaelt

Sep 2018 – Jan 2020

Software Development (Bachelor)

Odense, Denmark

University College of Northern Denmark

Aug 2013 – Jan 2016

Computer Science (AP)

Aalborg, Denmark

PROJECTS

Audit Engine – Automated System Verification Platform

Nov 2025 – Jan 2026

- Designed and built an internal platform for automated security, reliability, and observability audits of distributed edge-to-cloud systems.
- Implemented repeatable verification of IoT security posture (device identity, TLS, MQTT) and gateway behavior via Scala-based API services.
- Developed an extensible probe architecture in Rust, turning expert system reviews into executable checks.
- Tech: Scala 3, ZIO, Rust, MQTT, TLS.

Rust IoT Gateway

Aug 2025 – Nov 2025

- Secure edge gateway connecting STM32 devices → MQTT/TLS → Rust backend.
- Device authentication, certificate handling, telemetry ingestion, and configuration management.
- Full observability with OpenTelemetry, Prometheus and Grafana.

Functional Full-Stack Platforms

Now 2023 – Jul 2025

- Developed multiple production-style SaaS platforms as part of the Rock the JVM advanced functional programming curriculum.
- Implemented full-stack systems in Scala 3 using ZIO / Cats Effect, Http4s / Tapir, SQL persistence, ScalaJS frontends, and integrations with email, Stripe payments, and ChatGPT.
- Focused on clean architecture, type safety, testability, and production-oriented backend design.

Digital Twin Data Modeling with IoT for Peak-Shaving in Virtual Power Plants

Jun 2021 – Aug 2022

- Designed and implemented a digital twin platform for real-time monitoring of distributed energy assets.
- Ingested and processed streaming telemetry from battery devices, weather feeds, and market data via Apache Kafka, Java, Scala, and Akka.
- Developed forecasting algorithms for electricity pricing and battery scheduling.
- Delivered dashboards with KPIs on capacity, fleet health, and connected devices, enabling smarter energy management.

CORE TECHNOLOGIES

Languages: Java, Scala, Rust, Python, SQL, JavaScript.

IoT and Embedded: STM32, MQTT, TLS/mTLS, Secure Boot, OTA, C.

Backend & Distributed Systems: Kafka, Spark, Hadoop, Akka, ZIO, FastAPI.

Cloud & DevOps: AWS, GCP, MinIO, Docker, Kubernetes, CI/CD.

Observability: OpenTelemetry, Prometheus, Grafana.

Databases: PostgreSQL, Redis, Cassandra, MySQL, BigQuery

PROFESSIONAL STRENGTHS

Technical leadership & mentoring

Secure system design

End-to-end ownership

Architecture & modernization

Stakeholder communication

LANGUAGES

Danish: Native.

English: Full professional proficiency.

German: Limited working proficiency.