Mats Jørgen Skaslien

Software engineer

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Software engineer with an M.Sc. in computer science. I have experience working with a wide range of technologies both front- and backend in small and large teams. I value modular code and continuous delivery. In my spare time I develop games, bake bread and run.

Skills

- NET/ C#
- Node.js/ TypeScript
- Go
- React + Next.js
- Docker
- Kubernetes
- SQL (Postgres, Azure)
- Kafka, RabbitMQ, SQS
- ElasticSearch (ELK)

Professional experience

Maperfo - Architect/ Fullstack   Jan '24 - present

Led the transition for Maperfo from a restrictive no-code platform to a robust, scalable web application. As a team leader and architect, my role involves guiding the company's junior developer, architectural design, and project monitoring. Initiatives include setting up the web application using **MongoDB** and **Atlas search**, **Next.js/React** with **TypeScript**, and hosting on **Vercel**. I also migrated the existing user base over to a self-hosted **OAuth 2.0** flow, ensuring a smooth onboarding to the new platform for existing customers. This transition is positioned to significantly reduce operating costs, enhance the company's development opportunities, and drastically improve website performance, SEO, and accessibility.

Ventistål - Backend   Jan '24 - present

In my role as a backend developer for Ventistål, I have led and implemented a series of improvements to support the company's operations and further development. My key contributions included:

Code Optimization and Upgrade: "Professionalized" and enhanced the robustness of **.NET 6 Azure Cloud Functions** through thorough code cleanup, writing of test suites, upgrading to .NET 8, as well as debugging and maintenance. This ensured higher code quality and system reliability.

Automation of Price Lists: Developed and implemented Azure Cloud Functions (**.Net 8**) for secure and on-demand generation of price lists in various formats (json, csv, excel), which increased the efficiency and availability of critical business information.

Infrastructure as Code (IaC): Implemented **IaC** using **Bicep** along with deployment **pipelines** to automate and simplify the process of provisioning and managing cloud resources. This contributed to more efficient and error-free deployments.

Data Migration and Modernization: Streamlined the company's data infrastructure by migrating existing on-prem databases to **Azure SQL** using **Azure Data Factory**. This not only improved data availability but also the system's scalability and operational reliability.

Improved Search Functionality: Optimized searches and updates against **ElasticSearch** to achieve more relevant results and lower operational costs.

Amedia - Fullstack/Backend   Aug '22 - Dec '23

Worked mainly as a backend developer in a team of four to execute a backend re-write for the sports streaming platform Direktesport, delivering continuously and meeting critical deadlines.

Developed a stream provisioning system using **Node.js** and **TypeScript**, simplifying broadcast scheduling for journalists by bridging **Sanity** with our online video platform. Worked with **event-driven** micro services using **AWS SQS** and **Apache Kafka**. Built a query service **REST API** using **OpenSearch.** Authored frontend features using **Svelte** and **SvelteKit**, including UI implementations and a streaming video upload web worker, enabling journalists to replace videos on our OVP.

Led development of a VOD management microservice, integrating diverse video sources and synchronising with multiple platforms. Additionally, maintained and developed **Java** apps, managed CI/CD via **Github Actions** and **Docker**, and took on responsibilities for **AWS** integrations using **Terraform**. Utilised tools like **Kubernetes**, **ArgoCD**, **Kibana**, and **Prometheus** for system monitoring and management.

No Isolation - Backend   Apr '22 - Aug '22

Contributed to No Isolation's restructuring of the backend for Komp. This involved both working on existing services in **Go** and **Node.js**, and the new development of microservices in Go with **Postgres** for data storage.

During my time with the client, I was also the main responsible for the summer interns. My tasks included planning in advance with No Isolation, coordinating, and supporting the students throughout their tenure.

Norwegian Digitalisation Agency - Fullstack   Sep '20 - Apr '22

Modernized and rewrote microservices from **Java** to **Kotlin** with **Spring Boot**, enhanced search performance and established "search as you type" using **ElasticSearch**, and wrote a **Python** library for parsing RDF to JSON-LD. Worked in a DevOps style where developers were responsible for **Docker** and **Kubernetes/Helm** for their deployments.

Developed **Google Cloud Functions** in **Go** for integrating NodeBB with the frontend.

Worked with event-driven microservices using **Rabbit MQ**. Actively maintained and developed front-end systems using **TypeScript**, **React**, and **Redux** in close collaboration

with designers. Further developed Dig.Dir's **design system** "Felles Designsystem".
Significantly improved site performance by switching to server-side rendering with
Next.js on high-traffic pages, and ensured compliance with **UU/WCAG accessibility
standards**.

Master Thesis Project - Fullstack   Jan '20 - Jun '20

Developed "Lister", a search engine and interface for Semantic Web data as part of my
Master's thesis. Implemented a React-based frontend and a **Node.js/Express.js**
backend integrated with **ElasticSearch**, establishing a sophisticated platform for data
indexing and search. Automated data ingestion through **Python** scripts executing
SPARQL queries, with interim storage in **SQLite**, facilitating efficient batch uploads to
ElasticSearch. Enhanced user experience by introducing "search-as-you-type"
functionality and a customizable UI for dynamic data exploration. The project
significantly improved accessibility and usability of semantic web data, evidenced by
qualitative and quantitative user studies.

Kaupang Krypto - Backend (part-time)   Apr '18 - Dec '19

Worked on establishing the backend, focusing on automating cryptocurrency
transactions using **Node.js**. Also worked on the frontend, implementing the new site
design.

Vipps - Frontend (internship)   Jun - Aug '19

Developed the Vipps Developer documentation in a cross-functional team, automatically
presenting up-to-date information for users of the Vipps APIs using **TypeScript** and
React.

Nordic Trustee - ML (internship)   Jun - Aug '18

Implemented a complete pipeline for extracting textual information from unstructured
PDFs using machine learning and natural language processing in a **Python** script. Also
aided frontend development in **React**.

Achievements

1st place and "Best Solution to Real World Problem"   2018

NEM Global Hackathon

Developed a chatbot for Facebook messenger that connected to users' cryptocurrency
wallets, allowing them to send cryptocurrency to friends using natural language
interactions. Implemented using **Node.js** and **Javascript**.

Education

Master of Science (Sivilingeniør) in Computer Science   2015 - 2020

Norwegian University Of Science and Technology

Specialized in database and search technology, my Master's thesis focused on developing
a search engine for the Semantic Web using **React** with **TypeScript** for the frontend
and **Python** for the backend. I also set up and hosted an **ElasticSearch** cluster for full
text search and "search as you type" functionality. The goal was to improve usability in

semantic web search tools, so design sprints and usability testing were conducted throughout the project.

In addition to my studies at the Norwegian University of Science and Technology, I spent a year at TU Wien during my exchange and two months at TU Graz while writing my thesis.

Etcetera

- Native Norwegian speaker
- Fluent in English
- Certified at level B 1.2 in German
- European driving license class B.