Øyvind Gerrard Skaar

Øyvind is a highly motivated and skilled backend developer and architect. He has been building and operating backend systems for more than 13 years.

While he can take many roles his main passion is working with small teams on new projects where he builds scalable and fast back-end systems from the ground up.

Øyvind has the rare combination of being able to drill into highly technical problems and also take a step back and evaluate business objectives and ROIs of the different solutions.

He takes pride in being a professional and self-driven partner, who takes ownership and drives things forward.

> *"I can personally recommend Øyvind, especially if you need someone to come in at an early stage and build something that needs to last."*
> *-- Martin Sandsmark, CTO and founding employee, reMarkable A/S*

CONTACT INFORMATION

Stockfleths gate 60a
0461, OSLO, Norway

+47 482 78 480

hello@oyvindsk.com

https://oyvindsk.com

linkedin.com/in/oskaar/

Competence Areas

- Cloud
- DevOps
- Web, API and backend development
- Agile
- Databases

Business Focus

- Greenfield projects
- Startups

Work Roles

- Architect
- Lead Developer
- DevOps
- Database Administrator
- Database Engineer

Industry Knowledge

- Startups & scaleups
- Business services
- Software vendors and consultants
- IT
  - Consultancy
  - Cloud
  - Data processing
  - Databases

EXPERIENCE - INDEPENDENT IT-CONSULTANT

Devbyte AS - Mai 2014 - Present

Øyvind is the owner and sole consultant of this company. Formerly Skaar Solutions (2014-2018)

RELEVANT PROJECTS

This is a summary. Please see https://oyvindsk.com/projects for a complete list, and full description, of all 16 projects.

2024

MVP Monkey - Nocode MVPs for early-stage startups

MVP Monkey was Øyvind's foray into a different customer segment and a new business model.

The idea was to help founders and early stage startups to get "unstuck" from the situation where they need a product but can't get funding without a product.

Spending a month or two to build a quick, but working, app is also a better way to validate ideas.

By using NoCode and AI tools, one could create web and mobile apps much quicker and cheaper.

LANGUAGES

Norwegian: Native
English: Proficient

SKILLS

Cloud based back-end architecture:
Microservices, Modular monoliths, Event Driven etc

Programming languages:
Go (golang), Perl, Python, PHP, Ruby, C, Assembly

Cloud:
Google Cloud Platform (GCP):

Results:

MVP Monkey never got enough traction, so I shut it down. Basically, it was too hard to find anyone who wanted to buy the services.

What I learned:

- Validating ideas without selling something is very hard (well, I already knew that, but still)
- No-code tools - I researched around 30 different No-code and AI tools. They are no longer my main focus, but they're nice to have in my tool-box.

Keywords: No-Code Development Platforms · No-Code Development · Customer validation Web Applications · Mobile Applications

Technologies: Multiple AI and No-code tools for rapid development, Webflow

2022

REMA 1000 - Æ IDP backend development and operations

Operation and development of the idp (login/authentication) part of the Æ app.

(On this project I was a subcontractor though Shortcut and 7n)

Keywords: Cloud Computing · IDP · Firebase · Firestore · Go · Google Cloud Platform (GCP) · Digital Authentication · Multi-factor Authentication · Authentication Systems

2021

Fantasy Football League - Built cloud backend system for startup

FFL was a fantasy-football (soccer) mobile app. It had several new features and innovative game-play to set it apart from its competitors.

It was made by a small team of 3 people.

Øyvind made the backend system, which contained:

- A Go program that contained the game logic and exposed an API to the iOS client.
- Integrations with third parties, mostly real-time information about football matches, players, goals, substitutes etc.
- Database for storing simple things like customer information, but also complex schema's for making a real-time "view" of the real world (PostgreSQL).
- Servers to run the integrations, game logic and REST API. In this case a manged PaaS (Google Cloud Run), so there was little "devops".

This was a fun project with fast development, great teamwork and exiting technical challenges.

Results:
The development and technical aspects was a great success. We created a fast, easy-to-use app, with novel game-play and real-time attributes, in record time.

However, FFL never found product-market-fit. My opinion, and I believe the customer would agree, is that not enough effort was put into marketing and customer research.

- Kubernetes Engine
- PaaS: App Engine, Cloud Run
- IaaS: Compute Engine, Autoscaling Instance Groups etc
- Cloud Pub/Sub,
- Cloud DNS
- Storage and databases: Cloud Storage (inc. signed urls), Firestore, Datastore

Other Cloud & infrastructure:
Digital Ocean (Iaas, running Docker), Hetzner (dedicated servers)

Databases:
Google Datastore & Firestore, Cloud Storage, PostgreSQL, MySQL, Redis, Arrango

Server daemons:
Installed and administered several server daemons for web, email etc. For the most part open source based, on Linux.

Operating systems:
Linux
OpenBSD, FreeBSD
Windows

Tools:
Docker
Git
SSH etc
Cursor AI
Helix, Vim
Standard Linux and BSD tooling

(On this project I was a subcontractor though Shortcut and 7n)

Keywords: · Technical Leadership · Software Development · DevOps · Backend Architecture · Go · PostgreSQL

Collaboration: Jira, Trello, Miro, Github, Gitlab and many others

2020 - 2021

HeiPetter - CTO, Technical leadership

HeiPetter is a Norwegian startup connecting with a purpose of getting people in difficult situations back to work. They do that through a digital platform, focusing on the talent and building on individual strengths.

Øyvind has been involved both as a part of the team and as a contractor doing development work.

As the technical leader my job was to translate the goals and strategy into tangible technical deliveries. I also vetted potential partners, freelancers and contractors. My main contribution was technical know-how and a laser-focus on what we needed to get to the next milestone.

Keywords: Technical Leadership

2020 – 2021

HeiPetter – Built prototypes and an MVP

Nocode prototypes:

Preceding the more complete MVP I created a couple of prototypes using No-Code tools. The first take was to use Bubble to create a semi-working web app, mostly to explore user signup and job creation. After hitting some problems, I switched to Adalo and created a more mobile-friendly prototype.

Technologies: Nocode, Bubble.io, Adalo

Backend for functional MVP:

Øyvind worked with a freelance designer to build a prototype of the web-based platform. The designer created the design, html and css. Øyvind wrote the backend, converted the HTML into templates, created data models and deployed the application.

Functionality:
User signup and login, job registration and listing. Automatic matching (sorting) of jobs based on the user preferences.

Technologies:
Go, Google Cloud Appengine and Datastore. Standard web technologies.

Results:

Both the prototype and the MVP gave us something to test with potential users. It's vital to get user feedback as early as possible. They also gave us something to show to investors and other potential partners.

Keywords: Nocode · Software Development · DevOps · Cloud

2020
(4 months)

Prototyping a new secure payment solution

This unnamed project was one of three greenfield projects I worked on for Shortcut customers in 2020. Shortcut is one of the leading app makers in Norway.

Millions are lost every year because of fraudulent b2b payments.

The banking infrastructure itself is secure, but money can still be sent to the wrong account number. This project would solve that by guaranteeing correct and unforgeable information.

This was an interesting project for me because it combined many of my interests:

- Security
- Research and prototyping
- Technical problems solving

We were a team of 2-3 people. Among other things, I created a Certificate Authority and helped the other developers with strong, on-device encryption and signing.

(On this project I was a subcontractor though Shortcut and 7n)

Keywords: R&D · Problem Solving · Secure development

2016 - 2020 **reMarkable - Built the first cloud-based backend system**

reMarkable is a very successful Norwegian startup. They have created a new type of device, a "paper tablet" to read, write and sketch on. Øyvind started working with them early on, when they were just eight people.

The company has grown to around 500 people and have been valued at 1 billion USD.

Øyvind was the only person working on the backend for the first few years and built a cloud based backend from scratch. Since then the system have expanded and more people joined the cloud team.

The main feature of the cloud service is syncing notes, drawings and documents from the users reMarkable device to other devices such as phones, tablets and computers. The backend also handles Authentication, Authorization and integration with third party services.

Challenges:
- Real-time: Parts of the system require soft real time attributes.
- Novel: Parts of this system are quite novel. This, combined with the typical restricted resources of a startup, means we can not blindly follow "best practices".
- Scale: Large amount of concurrent users

Results:
The bakend system got reMarkable from 0 to 1 and handled the very successful launch and the first few years of operations with relatively minor improvements.

Reference:

"*Even though he worked as a consultant he immediately took responsibility for and drove the development of our entire cloud solution from the ground up.*
[..]
When Øyvind came in there wasn't a single line of code written, nor any architecture planned. He took on the responsibility for planning and executing what was necessary to go from high-level ideas about what our cloud solution should and could be, to what we have today"

-- Martin Sandsmark, CTO

Keywords: Google Cloud Platform, Go (Golang), Event-Driven Architecture, Google Datastore, Google App Engine, NoSQL, Distributed software architecture, Event Sourcing, Api design, Devops

2018 - 2019

reMarkable - Researched and developed a new document Synchronization prototype

Øyvind was part of a small team of 3 developers who prototyped a novel way of synchronizing files across devices (reMarkables, phones, computers etc).

Goals: Achieve fast and correct document synchronization while using as little bandwidth as possible.

They achieved this with known, but somewhat niche methods like Content-Addressable Storage and Merkle Trees.

Keywords: Distributed software architecture, Research, Content-addressable storage, Prototyping, Merkle Trees

Active development:

2014 - 2017

Hosting and maintenance:

2015 - 2023

Intolife - Built custom SaaS platform, IntoFood

Intolife is a small company that helps restaurants cut carbon emissions and save money. Will from Intolife was interview by NRK Dagsrevyen: https://bit.ly/39HzsND

Øyvind has worked with them for almost 9 years on several successful projects.

The main one was building and running (hosting) their Intofood web application. The purpose was to save time by helping with data-input and report generation.

The workflow used by Intolife before this project was based on Excel and manual data input. This worked fine. But it was time-consuming and limited the possibilities for interacting with third parties. With this project they created a fully customized web-based application for Intolife.

The goals were to cut down the time required for data entry and to automatically generate reports. The project was developed using lean startup methodologies. This provided more flexibility and saved money by avoiding development of unnecessary features.

Since flexibility was important, the software was developed in phases, with their own milestones. This made it possible to quickly incorporate the lessons learned during development into the project.

Results:

The result was a web-based application that helps with data-input and report generation. This helped Intolife spend approximately 50% less time on each project.

The application is used mainly by Intolife, but it’s also open to other partners and customers.

Keywords: Backend development, PostgreSQL, Cascading Style Sheets (CSS), Docker, HTML, Linux, jQuery, JavaScript, Perl, Mojolicious

Active development:

2015 – 2016

Hosting and maintenance:

2016 - 2023

Intolife - Built a REST API backend for IntoFood

"*We are proud to announce the forthcoming release of the integration platform for IntoFood. This will allow existing food service management systems to automatically connect to IntoFood and receive sustainability metrics for menus, sales and purchasing.*"

— Intolife.no/news

This project was launched to make it possible to integrate the Intofood Web Application with third parties. These third parties are typically customers and partners. They can use the API to include waste and emission data (GHG) in their own software and appliances. Using the API they can get this data automatically, without human interaction.

Øyvind designed the REST-like API, and wrote the backend code in Perl 5. He also wrote API documentation and client example code in PHP.

The API was completed and deployed to production on Google Cloud. For years It was used by IntoLife customers daily and opened up for many new possibilities. Use-cases that would otherwise involve too much human labor was made quick and easy.

Keywords: API design, PHP, Representational State Transfer (REST), Perl, Documentation, Linux, Docker, Backend development, PostgreSQL

2015

Picterus - REST API design and implementation as Backend developer

Picturus is a medical app designed to diagnose Jaundice in newborns. Untreated jaundice in newborns is responsible for 114,000 deaths and 65,000 permanent brain damages each year.

Cheap treatment is available through e.g. sunlight, but the diagnostic devices in use today cost around 10,000 dollars, making them practically unavailable in low-resource settings.

Picturus therefore developed a smartphone app capable of diagnosing this condition.

As a subcontractor, Øyvind developed a small part of this app. With his specialty in backend systems he created a REST-like API to support features in the app that relies on something outside the device (phone) itself.

Keywords: Api design, Representational State Transfer (REST), PHP, SQL, SqlLite

2015

Shout Out Referral - Prototype design and implementation

Shout out Referral is a referral system for web-shops that merges e-commerce with social media. It was a new project from individuals with success from other e-commerce ventures. They had a good idea and e-commerce experience. What they needed was someone with technical know-how and developer background to help them move forward from the idea phase.

Results:
Øyvind helped draw up the technical architecture and the rest of the technology stack.

After we figured out the core features, he implemented a simple prototype.

What we learned:
Using new technology can be unpredictable. There can be hidden advantages and disadvantages. Hidden disadvantages are likely more common, the advantages are often well promoted.

Keywords:: Research and Development (R&D) · System Architecture · Software Development · Google App Engine · Go (Programming Language)

OTHER EXPERIENCE

2005 - 2014 **Opoint (now M-Brain) - Backend Developer and DBA**

Øyvind developed internal and external facing systems, mainly in Perl and PHP. He was also responsible for system administrator related tasks, such as implementing and maintaining mail and backup solutions.

He also wrote, among other things, a backend Perl application to reliably transfer most of the data going to external customers, REST API's, web-to-pdf programs and an asynchronous Twitter system.

In addition he developed systems and APIs for large scale data-exchange with third parties (B2B) and was part of B2B customer relations.

(Part-time position from 2005 and full-time position from 2010)

Keywords: Linux, MySQL, Perl, PHP, XML, XSLT (Extensible Stylesheet Language), C

2004 - 2005 **IT-assistant, part-time — Kristelig Gymnasium**

Configured and maintained desktop computers. Provided technical support for employees. Automated Operating System installation.

2001 - 2003 **"IKT" intern — Norges Idrettshøgskole**

Configured and maintained desktop computers, network (Cisco), thin clients and servers (Windows 2000 and legacy unix systems). Provided technical support for employees and students.

PRESENTATIONS AND PAPERS

2009

"Organized Crime in Virtual Worlds: How to Get your own Syndicate"

Shortpaper and presentation at Nordsec 2009, the 14th Nordic conference on secure IT systems.

http://nordsec2009.unik.no

2009

"Organized Crime in Virtual Worlds"

Academic Forum on Security, November 2009
http://wiki.unik.no/index.php/Infosec/Meeting200911

2009

"Online Games Security with Trusted Computing"

Academic Forum on Security, March 2009
http://wiki.unik.no/index.php/Infosec/Meeting200903

EDUCATION

2008 - 2010

Master of Science in Informatics — University of Oslo and University Graduate Center (UNIK)

Thesis: "*The potential of Trusted Computing for Strengthening Security in Massively Multiplayer Online Games*"
https://www.duo.uio.no/handle/10852/8732

Security related courses: cryptography, operating system security, software security, security in distributed systems.

Other: communications protocols and routing, open source software development with Java frameworks, distributed systems and interactive websites.

2004 - 2007

Bachelor of Science in Informatics — University of Oslo

Software development: Java, python, php, c, c++, fortran, assembly.

Other: databases, computer architecture, tcp/ip, systems development, logic and computability, algorithms and data structures, mathematics, media and communication (computer games, multimodal web-design), human–computer interaction, xml and xlst etc.