Dag Erlandsen

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Projects

Multi, Gyldendal Norsk Forlag
Senior front-end developer | 2009 – Now

I worked almost exclusively for Gyldendal Norsk Forlag on the Multi products, which is the market leader in Norway for teaching mathematics to children. I developed a proprietary web framework for making web-based games and other interactive content (js, canvas, webGL, Node.js). I implemented a lot of interactive content using this framework in close collaboration with the editors and authors. When needed I ordered illustrations from an external designer which I integrated into the basic design and UX I did myself. I used Google Analytics to measure trends which I presented in a monthly report to all interested parties. Occasionally I worked with developers on other projects (like Salaby) to get synergies from internal cooperation. Early in the project I worked about 6 months in a small team with test-driven .Net C# development under a Scrum regime, but the main focus has been on JavaScript and recently TypeScript. The last few years I've worked a lot with React (ts, js) on code bases from multiple developers, both class and functional components. Recently I've spent more than 1.5 years on upgrading most of the interactive Multi content to satisfy the accessibility law requirements in Norway. For some examples, see Multi Nettoppgaver 5–7

Evolutionary creatures
Side-project | 2017–2019

While working part-time for Gyldendal I worked about 1000 hours on my own project where I used machine learning to control virtual creatures. I integrated Bullet Physics Engine into Unreal Engine 4 and my AI-powered system controlled the power to the different muscles for the creatures to obtain certain goals, like moving as quickly as possible in a low gravity setting, or not falling over in a high gravity setting (video) (Python, NumPy, TensorFlow, C++, UE4).

My early background is from game development, but now I love to work with React, Next.js and other web technologies to build modern web apps preferably running in the AWS ecosystem. I have worked on the whole stack, which I feel is beneficial when working with other developers and it allows me to do some back-end tasks myself, but my main expertise is on the front-end since this is where I have most of my recent experience.

I'm used to working in a corporate setting, relating to people from different fields as well as teams of consultants, but I'm self-driven and can also work independently for extended periods pushing the project forward on a daily basis. Using collaborative tools like Figma and Zoom video meetings is great in my opinion since it allows for more flexibility in terms of working remote.

I have a strong passion for technology and are usually doing some kind of side project. Recently I'm fascinated by the rapid progress in machine learning and are spending a fair amount of my free time following this field, including experimenting with the latest models like GPT-3, Midjourney etc and I'm an avid user of GitHub Copilot. I also have a constant focus on expanding my repertoire and are always picking a new language or technology for the latest side project.

I currently live in Oslo and can work on-site/hybrid in this region, but I'm also happy to work 100% remote since this allows me to live a digital nomad lifestyle combining work and travel. I'm flexible in terms of time differences if working for clients in different time zones.

Work experience

Freelance Consultant | Spinning Owl AS | 2009 – Now

I started out working for Kroma, which was a sub-contractor of VG, developing their VG TV Flash-based video player which was one of the most used web-based video players in Norway at that time.

After that I worked exclusively for Gyldendal Undervisning which is a division in Gyldendal Norsk Forlag, Norway's largest publishing house. I worked full-time on-site in their offices in Oslo from 2009-2017 and full-time remote from 2019-2020 upgrading their massive portfolio of interactive Multi content to adhere to the accessibility law requirements in Norway. From 2017-2019 and 2020-2022 I've worked part-time remote.

Full Stack Developer | Tape International AS | 2003 – 2009

I started this company with friends and we developed our own CMS as well as doing consulting. I worked mainly on the Microsoft stack (MS SQL Server, Classic ASP, VBScript, XSLT, ASP.NET, C#), but for a few months I also worked with Java Enterprise development on-site for Barclays Bank in Bournemouth/England developing their corporate internet banking solution which was by far the biggest project I've ever been involved with since it had a whole floor of consultants from around the world. In addition to this full-time position, I worked on average about 10 hours per week on a massive side-project developing neural net based high frequency trading bot which at one time traded my own funds without human intervention on the American stock market using the InteractiveBrokers API.

Freelance Consultant | Erlandsen | 1998 – 2000

I worked mainly for a company called Ara Applications where I developed a native Windows application with a InstallShield installer which was used by call centers for handling all their daily tasks (picking up, inspecting queues, redirecting etc). It was used amongst others by the call center of Aftenposten for handling all their telephony needs.

Developer | Funcom | 1994 – 1998

I worked mainly on developing the Sega Mega Drive version of Jack Nicklaus golf game. It was based on 3D graphics on custom console hardware and very limited system resources, like 64KB of RAM. I also worked a few months in R&D testing out a novel idea for a custom 3D engine and later in the web games division mainly developing a Backgammon game client using Java Applets (Motorola 68000 assembler code, C, C++, Java).

Education

University of Oslo | Materials, energy and nanotechnology | 2004 – 2008

The b.sc program was a combination of mathematics, physics and chemistry. In the last half I specialized in physics picking several quantum mechanics and computational physics courses. My grades were in the top 20% of the normal distribution.

Gjøvik Ingeniørhøgskole | Computer Engineer | 1993 – 1994

Because of my activity in the Amiga demo scene during my teens, I got a job offer from Funcom to do game development and then dropped out to pursue my dream of making games professionally.