

Nikolai Emil **Damm**

SOFTWARE ENGINEER

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Education

Kildevæld Efterskole Kolding, Denmark

GRADUATION FROM PRIMARY SCHOOL 2008 - 2011

Sønderborg Statsskole Sønderborg, Denmark

GRADUATION FROM STX 2011 - 2014

University of Southern Denmark, SDU

LEARNING AND EXPERIENCE TECHNOLOGY (NO DEGREE)

Knowledge gained:

- UX and Interaction Design.
- VR and AR development.
- Game development with Unity.
- Web development with JavaScript.
- · Projects:
 - 1st semester: An Asymmetrical Multiplayer Game developed with GameMaker. It turned out well, and we were asked to showcase it for new students, which was cool.
 - 2nd semester: A booking system made as a Node.js web application for a housing cooperative firm that needed a modern way to book
 out their guest apartment. It was made as a calendar utilizing Bootstrap, different frameworks, and a NoSQL database to save bookings.
 It is, as far as I know, still used today.
 - 3rd semester: A Node.js web app for a simulated primary school project week about bees.
 - **4th semester:** A toy for children in a kindergarten we worked with. It was a pillow that made sounds when touched. It was made to enhance different kinds of play. It was not very successful, but it was a fun project to work on.

University of Southern Denmark, SDU

Odense, Denmark

Odense, Denmark

2016 - 2018

B.S. IN SOFTWARE ENGINEERING

2018 - 2021

- · Knowledge gained:
 - Algorithms and data structures.
 - Architectural and infrastructural patterns.
 - Containerization and clustering.
 - Operating systems and network.
 - Programming paradigms and languages.
 - Software engineering principles, practices, tools, and techniques.
- Projects:
 - 1st Semester: A clone of the game Bubble-Struggle written in Java with object-oriented patterns and the 3-layer architecture.
 - **3rd semester:** A web app for students wanting to study abroad. A map with universities worldwide, where a user could click on a university to get cultural information and the big-mac index compared to their origin country.
 - 4th semester: A boss fighter game utilizing the OSGi framework to make every component in the game modular. We made it possible to disable and enable components others depended on by iteratively disabling dependencies.
 - **5th semester:** Experts in Teams project concerned with the effect on CO2 emission in a future where migrating fossil-fueled planes to hydrogen-powered planes is possible.
 - **Bachelor thesis:** I built a generic framework capable of translating one text source into another, e.g., from Java to C#. The framework was used to generate AnyLogic models for a web-based application (EcosystemMapGenerator) I built for SDU.

MAY 31, 2023

MSc in Software Engineering 2021 - 2023

- · Knowledge gained:
 - Big Data Systems
 - Cloud computing
 - DevOps
 - Domain Specific Languages
 - Embedded Systems
 - iOS Development
- · Projects:
 - 7th semester: A big data system that scraped satellite imagery of beach geo-locations from the Sentinel-2 satellite and processed them to determine how shorelines have changed over time. An Android app was also built to visualize the data.
 - 8th semester: A simulated assembly line consisting of a self-constructed crane, a rotating disk, and a web camera. It was programmed by the group's own DSL, which generated a client that could execute the program. The client utilized MQTT to communicate with the embedded system.
 - 9th semester: We developed Power Price Assistant, a web app that simulates a system that can advise on what electricity provider to choose based on the user's electricity consumption patterns.
 - Master thesis: A study of whether a data space can be implemented as a data mesh and what benefits and drawbacks it can have for the energy sector in Denmark. A prototype of a data product, the central component of a data mesh, was developed to test the hypothesis.

Skills_

DevOps Docker, Docker Swarm, (HashiCorp Nomad), Portainer, GitOps, Grafana and Prometheus, (InfluxDB TICK)

Data storage SQL, NoSQL, Hadoop, (Ceph), NFS

Back-end REST API, CRUD, MediatR, EFCore, Kafka, Spark

Front-end Blazor, Vue, HTML5, SASS, SwiftUI

Software categories Web, Phone, Desktop, CMS, Services, DSL, Generation, Parsing, Games, Robots, Clusters, Pipelines

Programming C#, Swift, Java, TypeScript, Python, LaTeX, ReGeX, PlantUML

Languages Danish, English

Experience

Elgiganten

Augustenborg, Denmark

STUDENT WORKER/CLOSING RESPONSIBLE

2011 - 2013

Sønderborg, Denmark WAREHOUSE EMPLOYEE July. 2014 - Sep. 2014

Fakta Augustenborg, Denmark

2014 - 2015 STORE EMPLOYEE

The Gap Aalborg, Denmark

BARTENDER Feb. 2014 - Apr. 2015

Danfoss Nordborg, Denmark

JKS SUBSTITUTE May. 2016 - July. 2016

GF Insurance Odense. Denmark

STUDENT DEVELOPER 2018 - 2019

Worked with front-end development, Sitecore, and maintenance of the backend.

• Contact Person: Karsten Elbek Frimark, Phone: +45 29690167, Linkedin: udretteren

University of Southern Denmark, SDU

Odense, Denmark

STUDENT DEVELOPER AT MAERSK Mc-KINNEY MØLLER INSTITUTE

2019 - 2021

- · Built the EcosystemMapGenerator, a web app capable of generating agent-based Ecosystem Diagrams from data typed into the app. It was built with Blazor, .NET, and EFCore and was deployed to Azure with a GitOps workflow. The app was extended to generate AnyLogic projects with the framework I built and my bachelor thesis.
- Contact Person: Bo Nørregaard, +45 65503545, Linkedin: bo-nørregaard-jørgensen

FiftyTwoKolding, Denmark

STUDENT DEVELOPER 2021 - June 2022

• Working on the backend system that handles all requests from FiftyTwo-owned shops. Mostly working with C#, SQL and Visual Basic.

 Umbraco
 Odense, Denmark

STUDENT DEVELOPER

- Juli 2022 now
- Working on Umbraco Heartcore, a headless CMS offering.
 Contact Person: Morten Christensen, Linkedin: mortenchr