

## EDUCATION

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- **IT University of Copenhagen** Copenhagen, Denmark  
*Master of Science in Computer Science*  
Sep. 2019–Jun. 2021
- **Hochschule Flensburg University of Applied Science** Flensburg, Germany  
*Bachelor of Science in Media Informatics*  
Sep. 2015–Aug. 2019
- **Valley Lutheran High School** Phoenix, Arizona  
*1-year AFS student in a foreign-exchange program*  
Aug. 2010–May 2011
- **Auguste-Viktoria-Gymnasium** Flensburg, Germany  
*Sociologically bilingual graduation with Geography as main topic*  
2004–2014

## EXPERIENCE

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- **Zendesk** Copenhagen, Denmark  
*Student Developer*  
Oct. 2019–Present
  - **Ruby on Rails:** Incrementally upgrade Rails; develop in large Rails application.
  - **Dual-boot framework:** Implement a dual-boot tool to run two versions of Rails parallel in testing pipeline.
  - **AWS RDS:** Find a strategy for resilience in unhealthy database clusters.
- **visuellverstehen GmbH** Flensburg, Germany  
*Full Stack Web Developer*  
Jan. 2018–Sep. 2019
  - **PHP with Laravel:** Custom web application solutions using PHP and the Laravel framework.
  - **Vue.js:** Single Page Application development with frontend reactive framework Vue.js.
  - **TYPO3:** Website development with a powerful CMS called TYPO3 based on PHP.
- **Weinstube im Krusehof** Flensburg, Germany  
*Software Development*  
Mar. 2018–Sep. 2019
  - **PHP with Laravel:** Developing a JSON API and Laravel backend
  - **Vue.js:** Building a reactive SPA with WebSockets for continuous communication between two iPads

## PROJECTS

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- **CERN-Solid code investigation:** From October 2020 to June 2021 I will be doing a CERN-Solid code investigation. This research aims at observing benefits and drawbacks on the integration of the Solid specifications into a large and sophisticated software system. Solid is a web decentralization project led by Sir Tim Berners-Lee and was initially developed at the MIT. The idea is to change how web applications work with data, resulting in data ownership fully controlled by the user/content creator. The investigation is carried out in collaboration with CERN. CERN and the Solid project share a lot of common values and is therefore interested in the success of the decentralization project.
- **Compiler optimization for DOM diffing:** As a university project a fellow student and I created a functional language with a compiler written in FSharp. The compiler had optimizations like partial evaluation and symbolic execution to improve the DOM diffing algorithm. The idea was in MVC web applications a lot of resources are wasted on comparing two versions of the vDOM when an update occurred. This comparison could be done during compilation of the web application written with our own language and framework. It would compile to JavaScript and instead of doing any diffing in the frontend it would have the change attached to the event producing the change.
- **Laravel web application with reactive VanillaJavaScript frontend:** I built a Laravel application with VanillaJavaScript front-end for a restaurant in Flensburg. The software provides a structured overview of waiting guests, register incoming customers and associate them with a number. The goal was to maintain a structured list of waiting customers for fair and efficient seating. The web application can be run on two iPads: One registers new guests. The other assigns them to tables. They are networked using Pusher to maintain a communication channel using the WebSocket protocol. This allows the system to send notifications and update the DOM as new data is collected.

## PROGRAMMING SKILLS

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- **Languages:** Ruby, JavaScript, PHP, Python, Java, HTML, CSS, SQL
- **Technologies:** Ruby on Rails, AWS, Laravel, Vue.js, Git, Datadog, Kubernetes