

Christian Skafte Beck Clausen

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CORE SKILLS AND TECHNOLOGIES

- **Skills:** Systems- and Software Architecture, Agile Software Development, Testing Platforms, DevOps, Cloud Native, Co-Simulation Frameworks, Digital Twins, Distributed Systems, Multi-objective Optimization, Mentoring and Teaching, Research and Development.
- **Technologies:** Java, Python, C#, JavaScript, GitLab, MQTT, NATS.io, Docker, VMWare, MongoDB, PostgreSQL, Unreal Engine 5, Grafana, Matplotlib, Plotly, Linux, Windows, MacOS.

WORK EXPERIENCE

SDU Center for Energy Informatics Aug. 2019 – Present

An application-oriented research center at the Maersk Mc-Kinney Moller Institute, University of Southern Denmark focusing on transforming the energy sector towards sustainability through energy informatics and digitalization.

Software Engineer (Assistant Professor) Nov. 2025 – Present / Postdoc Apr. 2025 – Oct. 2025 Odense, Denmark

- Architecting and implementing an agent-based simulation platform provided as a cloud-native service (SaaS) aimed at industry and research partners to inform decision making and strategies in the energy sector.

PhD Fellow/ Sep. 2020 – Mar. 2025 Odense, Denmark

- Developed simulation-based testing platforms to ensure software functionality and qualities, and to accelerate development through continuous integration and testing.
- Reengineered a Java-based framework for multi-objective optimization, reducing technical debt, enhancing software qualities and maintenance by reducing unused legacy code by 70%.
- Collaborated with industrial partners and universities on interdisciplinary research and development issues to ensure real-world relevancy.
- Produced widely cited, peer-reviewed publications and delivered presentations to global research and industry audiences.
- Designed and taught software architecture and object-oriented programming courses with documented exemplary feedback from participants.

Software Developer (Part-time)/ Aug. 2019 – Sep. 2020 Odense, Denmark

- Implemented CI/CD pipelines and Dockerized workflows to optimize development processes to ensure deployment consistency.
- Migrated from SVN to GitLab, setting up and administering a self-hosted instance to structure and centralize software artifacts.

OFFIS, Carl von Ossietzky University of Oldenburg Apr. 2024 – May 2024

An application-oriented research and development institute that works within the energy sector.

Visiting Researcher Oldenburg, Germany

- Conducted collaborative research and development on simulation-based software testing using co-simulation (Mosaik) and functional mockup units (FMUs), and contributed to their open-source simulation platform.

Universal Robots A/S Oct. 2016 – May 2018

A world leading manufacturer of collaborative robots.

Software Developer (Part-time) Odense, Denmark

- Implemented new features and resolved bugs in a Java-based UI for collaborative robots.
- Automated technical documentation workflows using Python to ensure up-to-date documentation is shipped when executing the CI/CD pipeline.
- Created SQL-based procedures for KPI dashboards to monitor agile development processes.

Dania Software A/S Nov. 2010 – Apr. 2015

A Danish company specializing in document automation and template management software for public and private organizations.

Software Developer / Technical Support Slagelse, Denmark

- Developed customized software for automated document generation using the .NET platform and Microsoft Office for Danish municipalities and small/medium enterprises, reducing administrative processing costs.
- Delivered technical hotline support across backend infrastructure and end-user systems, ensuring issue resolution for critical server applications and end user client tools. Supported major enterprises including Vestas, Rambøll, TDC, COOP, LIDL, and Sitecore.
- Performed ongoing maintenance of on-premises server hardware, virtual machines, and networking equipment, ensuring reliable daily operation.

EDUCATION

SDU Center for Energy Informatics, University of Southern Denmark 2021 – 2025

PhD in Software Engineering / Energy Informatics Odense, Denmark

The Maersk Mc-Kinney Moller Institute, University of Southern Denmark 2019 – 2021

MSc in Software Engineering Odense, Denmark

The Maersk Mc-Kinney Moller Institute, University of Southern Denmark 2016 – 2019

BSc in Software Engineering Odense, Denmark

Zealand Business College 2010 – 2015

Technical Diploma: Data Technician Specializing in Programming Ringsted, Denmark