Christian Skafte Beck Clausen

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Summary

Software Engineer (PhD) with 10+ years of experience delivering software across aviation systems, energy systems, robotics, enterprise and the public sector. Specialized in building testing platforms to validate critical business logic in realistic environments. Currently working as senior engineer at Jeppesen ForeFlight. Technical leader, mentor, and clear communicator with proven interdisciplinary collaboration across industry and research. Hands-on with backend and platform engineering in Java/Python/C#, CI/CD & containers (GitLab, Docker), event-driven systems (MQTT/NATS), and data/observability (PostgreSQL/MongoDB, InfluxDB, Grafana) on Windows, Linux, and macOS.

Professional Experience

Senior Software Engineer **Apr. 2026 – Present**
Jeppesen ForeFlight, Odense, Denmark

- Develop and maintain sync services for the Jeppesen ForeFlight product suite as part of the cross-functional Sync team, contributing across the full software lifecycle from requirements to deployment, including on-call critical incident response.

Platform Architect / Assistant Professor **Nov. 2025 – Mar. 2026**
SDU Center for Energy Informatics, Odense, Denmark

- Architected and implemented an innovative software-as-a-service platform for agent-based energy systems, supporting industry and research partners to run scalable simulations, test control strategies, and validate critical business logic.
- Established software design patterns and development best practices for an agent-based simulation framework used by an interdisciplinary research and development engineering team.

PostDoc and PhD Fellow **Sep. 2020 – Oct. 2025**
SDU Center for Energy Informatics, Odense Denmark

- Developed test platforms using software-in-the-loop, co-simulation, and continuous integration to validate critical software and infrastructure while reducing test feedback cycles from weeks to minutes.
- Modernized a legacy Java multi-objective optimization framework with a more modular, testable design, reducing the codebase by 71%, increased test coverage from 3% to 70%, and thereby simplifying long-term maintenance.
- Worked with industry partners and interdisciplinary teams to define requirements and deliver software for multi-objective optimization and validation workflows.
- Designed and taught software architecture and object-oriented programming courses, mentored engineers and communicated complex technical concepts clearly.
- Produced technical writing (papers, docs, videos) documenting system designs and contributed to open-source software. Regularly presented these deliverables to international engineering and stakeholder audiences.

Previous Industry Experience (Full-time, Part-time, and Contract) **2010–2020**
Dania Software A/S • Universal Robots A/S • University of Southern Denmark • Strategirummet.dk

- Developed software solutions across C#, VB.NET, Java, Python, and SQL for robotics, enterprise, Danish ministries and municipal applications.
- Implemented features and resolved defects in a Java-based UI for collaborative robots, and automated documentation workflows integrated into CI/CD pipelines.
- Implemented CI/CD pipelines, Dockerized development workflows, and migrated teams from SVN to a self-hosted GitLab environment.
- Created SQL-based KPI dashboards and automation tools supporting agile development processes and operational reporting.
- Delivered servicedesk and helpdesk support for major enterprise clients (Vestas, Rambøll, TDC, COOP, LIDL, Sitecore), resolving issues across backend systems and maintaining on-premises servers, VMs, and networking infrastructure to ensure reliable operation.

Education

PhD in **Software Engineering** (Energy Informatics), University of Southern Denmark **2021 – 2025**

Master of Science (**MSc**) and Bachelor of Science (**BSc**) in **Software Engineering**, University of Southern Denmark **2016 – 2021**

Core Skills and Technologies

- **Professional Strengths:** Technical leadership, mentoring, interdisciplinary collaboration, modernization of legacy systems, clear communication of complex engineering concepts.
- **Architecture:** Distributed systems, cyber-physical systems, event-driven architecture, modular, maintainable and testable software design.
- **Platform Engineering:** Agent-based systems, (co-)simulation platforms, software-in-the-loop testing platforms.
- **DevOps & Infrastructure:** GitLab CI/CD, Docker, automation pipelines using infrastructure-as-code principles, containerized development workflows, Cisco CCNA level computer networking.
- **Programming Languages:** Java, Python, C#, JavaScript / TypeScript, VB.NET.
- **Tools and Technologies:** Spring, Maven, JUnit, MQTT, NATS.io, InfluxDB, MongoDB, PostgreSQL, Grafana, GitLab, VMware, Linux/Windows/macOS.