4-Week Internship Preparation Plan

Internship: Aarhus University - Department of Mechanical and Production Engineering
Intern: Garikayi Delaney
Project: Development of a Digital Twin of a Small-Scale Model Factory for Teaching using Xcelgo Experior

This document outlines a structured 4-week plan to prepare for the internship, focusing on technical readiness, academic engagement, and personal growth.

Week 1: Foundation Setup & Planning

- Understand internship expectations and digital twin fundamentals.
- Study digital twins in manufacturing (read 1–2 articles).
- Watch introductory videos on Xcelgo Experior.
- Install Visual Studio, .NET Framework (4.7.2+), and C# environment.
- Set up a structured learning journal (Notion, Obsidian, or Google Docs).
- Update LinkedIn profile and announce your internship role.
- Connect with Aarhus faculty and peers on LinkedIn.
- Draft a personal introduction for meetings and networking.
- Write down three personal learning objectives for the internship.

Week 2: Experior & C# Essentials

- Build comfort with Experior's user interface and modeling tools.
- Create a basic digital twin model (e.g., a conveyor with sensors).
- Explore adding components and simulating real-time events.
- Review C# object-oriented programming: classes, events, delegates.
- Develop a simple C# application to reinforce core concepts.
- Explore Experior API/SDK documentation (if accessible).
- Sketch and plan two model factory layouts for potential simulation.

Week 3: Systems Thinking & Research Readiness

- Practice systems thinking: draw block diagrams and process flows.
- Create logic diagrams for your digital twin setup.
- Develop a plugin in Experior with custom logic using C#.
- Watch educational videos on digital factory layout and simulation.
- Read 2–3 research papers on digital twins in education or manufacturing.
- Summarize insights and draft a short literature review in your journal.

Week 4: Personal Branding & Final Readiness

- Finalize your CV with updated achievements and internship details.
- Organize a structured folder system for your work (Logs, Models, Docs).
- Practice explaining your project goals and ideas clearly.

- Learn a few basic Danish greetings and etiquette tips.
- Ensure visa, travel tickets, and insurance are in order.
- Prepare a checklist and pack technical gear (laptop, charger, etc.).