ZAKARIYA B. ALI

R&D Student Assistant at FOSS | Mechanical Engineering Student at DTU

PROFILE

Engaged and detail-oriented Mechanical Engineering student at DTU with a strong understanding of product development, mechanical design, and industrial optimization. I have experience with CAD modeling (SolidWorks, Inventor, AutoCAD), MATLAB, SAP, and process optimization, enabling me to translate theoretical knowledge into practical solutions.

I am a proactive problem solver who thrives in collaborative environments and takes an analytical and structured approach to technical challenges. With a solid understanding of mechanics, materials, and manufacturing processes, I continuously seek new ways to innovate and improve technical solutions.

Driven by curiosity and a passion for learning, I am always looking for opportunities to expand my engineering skills, particularly within engineering, automation, and emerging technologies.

CONTACT

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zakariya.dk

COMPETENCIES

- Technical documentation
- Cross-functional collaboration & communication
- Problem-solving
- Process optimization
- Data analysis (MATLAB, Excel)
- Strong skills in 3D modeling and technical drawing (SolidWorks, Inventor)

INTERESTS

- Strength training
- Walking
- Nature
- Sunbathing
- Football

EDUCATION

DTU - Technical University of Denmark
September 2023 – February 2027
B.ENG in maskinteknik (Mechanical Engineer)

NEXT - UDDANNELSE KØBENHAVN
August 2020 – June 2023
Højere Teknisk Gymnasial Uddannelse (HTX)

EXPERIENCE

FOSS Analytical A/S
Student Assistant – R&D (Wine&Meat)
January 2026 – now
I actively contribute to the team's efforts to develop innovative solutions, conduct thorough research, and gain valuable hands-on experience in product development within the food industry. I work on and develop solutions within:

- Surface Foreign Object Detection (SFOD)
- Alignment Tools
- Develop prototypes using laser cutting and 3D printing
- Developed a deeper understanding of materials, tolerances, robust design, and the interaction between development and production

Internship – R&D (Wine&Meat)
September 2025 – December 2025
During my internship in R&D at FOSS Analytical, I worked on the development of a prototype and functional model for the new Surface Foreign Object Detection (SFOD) system for the MeatMaster 4.
The project involved working with light distribution, thermal management, and space and height constraints within the system. The project resulted in a full-scale functional model, which was used to collect data for AI training, both in-house at FOSS and at selected customer sites.

Student Assistant – Production (New Product Introduction)
July 2024 – August 2025
As a Student Assistant in New Product Introduction (NPI) at FOSS, I worked on developing, optimizing, and implementing Standard Operating Procedures (SOPs) for new products before they transitioned into production. I collaborated closely with engineers and production teams to ensure an efficient and seamless transition from development to production.

My primary tasks were:

- Preparation and optimization of SOPs for production processes
- Quality assurance and troubleshooting of documentation prior to release

- Collaboration with development and production teams to improve workflows
- Use of CAD software (SolidWorks, Inventor) for documentation and technical support
- Contribution to process optimization and improving production preparation

Noviqo – Founder & Developer
2025 - Now
Founder of a digital development company focused on the design and development of modern websites, web apps, mobile applications, and digital solutions. Responsible for the entire process, from ideation and UI/UX design to development, implementation, and launch of tailored solutions for clients.

RELEVANT COURSES

- 41533/41534 Dimensioning and strength 1 & 2
- 62146 Mechanical Product Analysis
- 62675 Mechanics
- 41681 Materials Science
- 62696 Product Development
- 41787 Production Technology
- 62646 Modeling and programming
- 62677 Applied Control Engineering
- 62657 Fluid Mechanics
- 62604 Thermodynamics and Energy Technology
- 62074 Project Management