

# SOFTWARE DEVELOPER & MECHANICAL ENGINEER

## GLENN WINBO SONDELL

### EMPLOYMENT HISTORY

---

#### GWS Consulting AB 2024-09-01 .. ongoing

I offer my services as a freelancing consultant within software- and product-development and IT.

##### Role & Responsibilities

Product development, consulting, IT

consulting freelancing

#### Alten Sverige AB 2018-06-01 .. 2024-05-01

At Alten I have worked with wide range different projects. Within product development I have worked with mechanical-design, electronics and software development. See the project sections for details.

##### Role & Responsibilities

Product development, consulting.

consulting

#### Materials Research 2015-08-01 .. 2016-09-01

At Jönköping University I supported research activities as a lab-technician.

##### Role & Responsibilities

CNC-machining, test-rigs, assisting with experiments.

SolidWorks MasterCam LabView

### SOFTWARE PROJECTS

---

Professional experience of software development.

#### Desktop CAD App 2022-08-01 .. ongoing

Created an application for **CerInvent** that allows the user to generate molds for manufacturing dental crowns. Started as a python project, but is now manly relying on rust.

Rust Python NumPy SciPy PyQt PyMadCad Gmsh PyVista CATIA GitHub CI/CD

#### AI Student Workshop 2022-06-01 .. 2022-09-01

Helped **Alten** attract students by preparing a workshop for Machine-Learning master students. [Repository](#)

##### Role & Responsibilities

Preparation of source code and data for the event. Deployed AI backend using Flask.

Python NumPy Pandas TensorFlow Keras Flask RNN GitHub Docker DigitalOcean

#### MedTech Startup 2020-12-01 .. 2022-12-01

Started the company **Orthovelox AB**, that aims to produce innovative solutions for orthopedic healthcare. Orthovelox developes design software based on 3D scanning.

##### Role & Responsibilities

Product Development, Software development, Project-Lead, Fund raising.

Python NumPy SciPy PyVista GitHub CI/CD Azure PyTest mypy 3D-Modeling

## MECHATRONIC PROJECTS

---

*Professional experience of electronics and embedded systems.*

### Medical Device 2021-09-01 .. 2022-02-01

Developed **Multi4**, a device for taking biopsy samples for cancer-diagnostics.

*Role & Responsibilities*

Firmware for embedded device, mechanical design, prototyping and testing.

Arduino SolidWorks c++

### Hygiene Device 2021-05-01 .. 2021-10-01

Developed the **Paprtect** prototype, a finger cover dispenser for public touchscreens.

*Role & Responsibilities*

Firmware for embedded device, pcb design, prototyping and testing.

Arduino KiCad c++

### IoT Device 2020-12-01 .. 2022-12-01

Developed proof of concept for **Progressive Safety**.

*Role & Responsibilities*

Firmware for development boards, testing and PCB cost estimates.

Arduino c++ Bluetooth

### Electric Forklift 2019-03-01 .. 2019-08-01

Helped **Helge Nyberg** develop an electric forklift for indoor use. The forklift uses force sensors instead of a conventional user interface.

*Role & Responsibilities*

Firmware for processing user input to actions and emulation of inertia.

Arduino c++

## MECHANICAL PROJECTS

---

*Professional experience of mechanical product development.*

### Mechatronic Components 2022-04-01 .. 2021-01-01

Helped **Husqvarna** with product maintenance and development of motor controllers, HMI panels and motors used in handheld battery powered products.

*Role & Responsibilities*

Coordinated product development between different **Husqvarna** sites and subcontractors. Mechanical design and configuration management of mechatronic components.

CATIA SmarTeam Teams

### Disposable Medical Device 2020-03-01 .. 2020-06-01

Designed a disposable flashlight for gynecology examinations.

*Role & Responsibilities*

Mechanical design and testing.

SolidWorks

### Automotive Accessories 2018-04-01 .. 2020-04-01

At **Thule** I developed torque keys, load carries and roof boxes. I also developed a friction drilling production method and helped with migration from version control systems.

*Role & Responsibilities*

Mechanical design, testing, prototyping and production development.

SolidWorks SmarTeam YaPdm

# SIDE PROJECTS AND AUTODIDACTISM

---

*Various for fun projects that have improved my skills.*

**sondell.org** 2024-02-01 .. ongoing

To learn about server fundamentals I selfhost a number of services for my family here: [myhome](#). Instead of relying on docker, I opted use nix to achieve better reproducibility.

web linux nix hosting nextcloud matrix mailserver git-server

**Product Configurator** 2023-11-14 .. 2023-12-01

A proof of concept where a [chair](#) rendered as a 3D model and based on meta-data about the 3D model a number UI elements are dynamically generated. So that same binary application could be used show how many different products can be configured. Only the frontend was made. [Repo](#)

Rust egui three-d GitHub cross-platform web windows linux

**delamat.se** 2023-09-04 .. ongoing

A sideproject where the plan is to make a website where users can share recipes and shoppinglists. The main purpose of this sideproject is learning how to use htmx and axum in practice. [Repo](#). Website: *Not yet deployed*.

Rust CSS HTMX axum sqlx GitHub open-source

**halfedge lib** 2023-05-24 .. ongoing

I have been frustrated with available libraries for rust and python for boolean operations on 3D-models. Therefore I started this project that aims to provide an opensource rust library with python bindings. The ambition is to provide robust boolean operations on halfedge datastructures. The project is heavily inspired by the white paper: [Exact, robust, and efficient regularized Booleans on general 3D meshes](#). [Repo](#).

Rust 3D-Modeling GitHub open-source

**Web Resume** 2023-02-01 .. ongoing

I maintain my resume as a website and the source code is available at [GitHub](#).

HTML CSS Tera Zola SSG open-source GitHub

**WASM Web App** 2023-01-01 .. 2023-01-10

Implemented [Conway's Game of Life](#) as a [webb app](#) using rust. [Repo](#)

WASM Rust HTML CSS GitHub

**Python Cad Library** 2022-12-01 .. ongoing

I contribute to the capabilities of [MADCAD](#), an opensource python CAD library.

Python Numpy PyTest open-source GitHub

**Daily Driver: NixOS** 2022-11-01 .. ongoing

I use Linux for both work and personal projects. Currently I use NixOS and benefits from the robust development environments it offers.

Linux Nix

**Embedded Rust** 2022-07-01 .. 2022-10-01

I made simple data acquisition firmware using rust for stm32 and nrf52 development boards. As a compliment I also made a desktop app to plot values from the devices.

Rust USB nrf52 stm32

**The Rust Book** 2022-05-01 .. 2022-07-01

Taught myself rust using the [Book](#) and fell in love.

Rust

## FORMAL EDUCATION

*Just a starting point...*

**Master: Mechanics** 2016-08-01 .. 2018-06-01

At **Jönköping University** I studied product development, materials engineering and design optimization.

SolidWorks CATIA FEA MatLab Visual Basic

**Project: Solar Car** 2014-08-01 .. 2015-12-01

Designed and built a solar powered car. Competed with the car in the [World Solar Challenge](#), a 3000km long race on the public roads of Australia.

*Role & Responsibilities*

System Engineering, Battery and Solar Panel design, CNC-machining.

SolidWorks FEA MasterCam Arduino

**Bachelor: Mechanics** 2012-08-01 .. 2017-06-01

At **Jönköping University** I studied product development, materials engineering and design automation.

SolidWorks FEA MatLab Visual Basic PLC



## LET'S TALK

GlennWSO

Mail me

Web CV

## SKILLS

3D-Modeling Arduino axum Azure BlueTooth c++  
CATIA CI/CD consulting cross-platform CSS  
DigitalOcean Docker egui FEA Flask freelancing  
git-server GitHub Gmsh hosting HTML HTMX  
Keras KiCad LabView Linux mailserver MasterCam  
MatLab matrix mypy nextcloud Nix nrf52  
NumPy open-source Pandas PLC PyMadCad PyQt  
PyTest Python PyVista RNN Rust SciPy  
SmarTeam SolidWorks sqlx SSG stm32 Teams  
TensorFlow Tera three-d USB Visual Basic WASM  
web windows YaPdm Zola