

SOFTWARE DEVELOPER & MECHANICAL ENGINEER

GLENN WINBO SONDELL

ABOUT ME

Glenn is a mechanical engineer and a self-taught software developer. His multidisciplinary background helps him understand the needs and challenges that people of different backgrounds face. This makes him an excellent developer, problem solver, communicator and team-player.

Glenn can help you with anything from writing firmware in Rust to automated testing in Python. He has great math skills and use them to solve problems related to mechanics, 3D-graphics, modeling and simulations.

Background:

Glenn started out as a mechanical engineer, but recently been more involved with software development projects. Glenn loves tinker with things and learn about new technologies. In particular Glenn was drawn to software development because it allows for faster iterations. Just compile and you get new a prototype to experiment with. Even rust compiles faster than a 3D-printer!

While his python is the programing language he has most experice with, he well leap at the opertunity to learn new tools. Having used mypy and pytest in larger projects, he knows the value automated testing. Glenn favorite language is rust, a language with emphasis on strong typing, correctness and memory safety.

SOFTWARE WORK

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.

Python

NumPy

SciPy

PyQt

PyMadCad

Gmsh

PyVista

CATIA

GitHub

CI/CD

AI Student Workshop 2022-06-01 .. ongoing

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. Deployment example using Flask.

Python

NumPy

Pandas

TensorFlow

Keras

Flask

RNN

GitHub

Docker

DigitalOcean

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

Developed, built prototypes and tested **Multi4**, a device for taking biopsy samples for cancer-diagnostics.

Role & Responsibilities

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

Arduino

SolidWorks

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

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

Started the company **Orthovelox AB**, that aims to produce innovative solutions for orthopedic healthcare. Orthovelox develops 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

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

ENGINEERING

Professional engineering experience without software 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 and testing 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** Glenn worked with product development of torque keys, load carriers and roof boxes. He also developed a friction drilling production method and helped with migration from version control systems. During his time at thule spent a lot time in the prototyping workshop and testing facilities, working closely with technician and test engineers.

Role & Responsibilities

Mechanical design, testing, prototyping and production development.

SolidWorks

SmarTeam

YaPdm

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

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

Role & Responsibilities

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

SolidWorks

MasterCam

LabView

MISCELLANEOUS SOFTWARE

Mostly for fun

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

Glenn have been frustrated with available libraries for rust and python for boolean operations on 3D-models. Therefore he 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*

Glenn maintains his resume as a website.

[HTML](#)[CSS](#)[Tera](#)[Zola](#)[SSG](#)[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 .. 2023-05-01*

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

[Python](#)[Numpy](#)[PyTest](#)[open-source](#)[GitHub](#)

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

Uses Linux for both work and personal projects. The Distribution of choice is NixOS, a system that offers robust and reproducible development environment amongst other things.

[Linux](#)[Nix](#)

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

Made some simple data acquisition firmware using rust for stm32 and nrf52 development boards. As a compliment he 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 himself rust using the [Book](#) and fell in love.

Rust

EDUCATION

Formal higher education.

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

Studied product development, materials engineering and design optimization at **Jönköping University**

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

Studied product development, materials engineering and design automation at **Jönköping University**.

SolidWorks

FEA

MatLab

Visual Basic

PLC



LETS TALK

-  GlennWSo
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SKILLS

