



## OHAD INBAR

MASTER OF MECHANICAL ENGINEERING  
MECHATRONICS

### PRODUCT DEVELOPER, CALIBRATOR & HANDS-ON

With the versatility of hands-on experience, I am a creative mechatronics engineer, with experience in embedded systems & microcontrollers, system & function development, and diesel calibration - a kind of a multitool.

With social and language skills, augmented by a genuine service feel, it comes easy to me to connect people across tech areas and culture. My technical skills are augmented by curiosity and creativity, typical to tech-enthusiastic engineer, with technical knowledge and a wide overview.

As a calibrator for diesel and torque control, I gained skills in calibration and in-car powertrain testing. I worked as function & system developer for driveline systems of wheel loaders and haulers, buses and cars, managing requirements, functional safety, doing testing and debugging as well, and as a UX engineer, getting the feel for customers' true needs. In pre-academic life, I worked in agriculture and served 3 years in the army.

### INDUSTRIAL EXPERIENCE

Automotive | Construction Equipment | Buses | Agriculture  
Embedded Systems & Rapid Prototyping  
Engine Calibration (Diesel)

### SKILLS

Creativity | Outside-the-Frame Thinking | Natural Leadership  
Perspective - The big Picture | Effective Communication |  
Critical Thinking | Tech-savvy | Genuine Service feel

### EDUCATION

**Master of Science in mechanical engineering** 1999 - 2004  
The Royal Institute of Technology (KTH), Stockholm, Sweden  
Specialized in mechatronics, embedded systems & rapid prototyping

### LANGUAGES

English (Fluent) | Swedish (Fluent) | German (Fluent) | Hebrew (Native)



### DRIVER'S LICENSE

B (Sweden)  
C (International)

**Certificates:**  
Wheel Loader  
Articulated Hauler  
Hällered (needs refreshment)

### CONTACT

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📍 Kinna, Mark Municipality

🌐 **Online CV**  
<https://ohadinbar5.wixsite.com/online-cv>

### COMPANY

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## WORK EXPERIENCE

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### **Senior System Engineer for Low-Speed Maneuvering, ADAS functions - Volvo Car Corporation, Göteborg 09/2024 – 12/2024**

As a system engineer/developer at Safe Vehicle Automation/AD&ADAS, I worked with Argus 3 project with migration of systems and functions from existing projects (CMA, SPA2, Argus2) for low-speed assistance functions, aimed at introducing a new Active Safety platform, focusing on low-speed maneuvering within AD&ADAS architecture. Within Argus 3, I handled the Engineering Statement of Work towards the Active Safety Domain Manager supplier. Working on requirement migration was performed in Car Weaver/System Weaver, and new signal database and signal management in Elektra and Database Editor (Vector tools). I collaborated with colleagues from the Shanghai team, the supplier engineering team and internal teams on aspects like the Park Assist Camera's field of view, and on the Vehicle Dynamic model, using Miro and Simulink, in order to find safety vulnerabilities in the Safety & Hazard analysis.

Tools – System Weaver/Car Weaver, Elektra, DB Editor, Miro, MS Office, Jira

### **Function Developer & System Designer for Buses - Core Chassis - Volvo Bus Corporation, Göteborg 08/2023 – 09/2024**

System development of the core chassis functions within Electronic and Software Architecture at Volvo Buses, using SystemWeaver for requirement management, CAN tools, and helping with topology review and System bridge plan, including functional safety.

I worked on the Core Chassis functionalities, with the design and review of End-User functions, detailed design level. Tasks and bug management were managed in Jira/Confluence. I participated also in Peer Review of colleagues' work. As a skilled engineer I assisted with onboarding of new, incoming colleagues. I participated in Functional Safety/ASIL level and ISO 26262 discussions and investigations. I also worked on bug solving, using CANalyzer and field reports. Bug fixing and quality refinement, including some code reviews were done in daily work, and HMI, e-mobility and ADAS function development were performed as help to adjacent teams, including migration of functions from Trucks into the Volvo Bus' system.

Tools – System Weaver, DB Editor, Kvaser, MS Office & Visio, Confluence, Jira, KOLA, CANalyzer

### **Mechatronics Engineer, User Experience & Human Factors - Volvo Construction Equipment, Eskilstuna, 01/2019 – 01/2021**

Responsible for the usability aspect of "People And Obstacle Detection" and "Stability Control" for excavators, I also worked on ideation and development of sound & feedback strategy for HMI platforms with buzzer strategy. I helped building a vibrational driver seat platform (with Raspberry Pi), tested for People and Obstacle Detection, with haptic and audible warnings. I analyzed and proposed boundary analysis for the UX team's engagement, the activities undertaken, based on roadmaps/timeline for the projects that needed UX input. I worked with the HMI's communication channels/bluetooth constraints, and created sounds for the new HMI, using sound design tools like Audacity and sound generation tools.

After applying for a patent in 2018, I tested my control lever design, on both a simulator (Oryx) and an excavator with dSpace Autobox Rapid Prototyping possibilities. I participated in wireframe creation, using Adobe Xd, Miro, Visio, and Adobe Illustrator. I worked with German colleagues on the Stability program and design of

Co-Pilot application and Android front-end developers on excavator instability detection, Collaboration with Mathematics Institute in Kaiserslautern, on the RODOS simulator.

Tools – Simulink, dSpace Targetlink/Autobox, Arduino, Linux Raspbian, MS Office, Miro, Adobe Xd, Canva, Audacity, Electronics HW soldering, electronics probing tools, mechanical/electronics (HW) workshop.

### **Function Developer for Driveline/Powertrain - Volvo Construction Equipment, Eskilstuna 07/2013 – 01/2019**

As a function developer and system engineer, I worked with articulated haulers and wheel loaders (medium/heavy range) development, in-code calibration, logs and diagnostics, start-stop, gear shifting control and continuous improvement processes. System engineering and requirement management were done in System Weaver. Coding was in C, with new functions developed using Simulink.

## WORK EXPERIENCE

### Function Developer for Driveline/Powertrain - Volvo Construction Equipment (Continued)

Driveline SW functions were developed and existing were given maintenance, using tools like ClearCase UltraEditor, Eclipse, and Borland for code management. Verification & validation activities using SIL (Software In the Loop), HIL (Hardware In the Loop) and MIL (Machine In the Loop), using test rigs or machines. I worked with diagnostics and handling of fault codes and logging, fault tracing (Trace32, Labview) and debugging. Rubus Real Time OS module tests (SIL) were performed and unit tests on test rigs (HIL) were done, occasionally also HTM configuration of the integration. CAPL scripts were created, also CAN configuration, writing CAN messages (J1939 protocol) for the ECUs. I participated in a task force in automatic engine start/stop for wheel loaders and developed early Simulink specs and system design for the new articulated hauler transmission.

In the Volvo innovation portal ("Interact"), I contributed continuously, and a control lever I invented was chosen to be developed and patented. Quality assurance reviews like FMEA and Risk Assessments were conducted. Work was managed using Agile methods and Kanban board.

Tools – System Weaver, Matlab Simulink, dSpace Targetlink/Autobox, MS Office, UltraEditor, Eclipse, CANalyzer, Trace32, Labview, Borland C++, ClearCase, Engineering Tool (Volvo), soldering, electronics probing tools, mechanical/electronics workshop.

### Calibration Engineer - Common-Rail diesel systems - Robert Bosch GmbH, Stuttgart (Germany) 05/2005 – 07/2013

As a calibration engineer for diesel applications, I worked primarily on Continuous Torque Monitoring, a redundant function level that encompassed monitoring functions of the entire powertrain. This was done for all VCC diesel variants, including the first hybrids, for Volvo Cars, Polestar and special applications, occasionally also Ford engines. I worked as a coordinator and first-contact for Continuous Torque Monitoring with the customer VCC, connecting internal and external stakeholders. Additionally, I was the function owner calibration engineer for Fuel Balance Calibration, and worked on the model-based air system as well. Work was performed mainly using ETAS Inca, ATI Vision, CAN tools. The internal documentation was in PDF and HTM winhelp, while the external documentation in Simulink and ASCET diagrams. Work included frequent expeditions with the customer teams, and communication was in German, Swedish and English. I belonged in a multipolar team that created very popular diesel engines for VCC, learned speaking German and the culture, and supplier-to-customer service relationships.

Tools – Matlab Simulink, PDF tools, Winhelp, CANalyzer, ETAS Inca, ATI Vision, (Bosch) proprietary ECU FLASHing/programming HW/SW, MS Office, ClearCase

### ADDITIONAL WORK EXPERIENCE

- Working student, Vehicle Dynamics research, Daimler-Chrysler, Esslingen (Neckar)
- Lab assistant, Tensor Lab, Atlas Copco, Stockholm-Sickla
- Assembly worker, ABB Control, Västerås
- Personal assistant, Uppsala Municipality, Uppsala
- Agricultural machine operator/Workshop technician, Israel
- Combat soldier (Anti-Tank unit), Israel
- Garden center/greenhouse worker, Kibbutz Yagur (Israel)

## MY PROFILE - IN OVERVIEW

A multitool, a tech-enthusiastic and curious engineer, with experience in automotive, construction equipment and agriculture, in international settings. Always having an overview of the big picture, I tend to excel in thinking outside the box as well. With this innate ability, I am an idea generator.

Hands-on as theoretical, I am a creative problem solver, having worked with calibration, testing, system engineering and function development (C, Simulink), and as a technician and agricultural machine operator, before and after serving in the army.

With social skills, innovative thinking, and a generous willingness to help, topped by a healthy sense of humor, I speak English, Swedish and German fluently, and see myself as a creative doer as well as a leader, passionate about service and User-Centered design thinking.

## COURSES AND FURTHER EDUCATION

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2024	Volvo Bus Corporation - Functional Safety, ISO 26262
2022	Leadership - deep dive
2022	Sustainable Leadership
2022	Entrepreneurship and Leadership
2022	Effective Leadership - Mission: mid-level leader
2022	Efficiency, Losses and Metrics
2022	To lead and coordinate without being a supervisor
2022	Agilt ledarskap - Grundkurs (Agile Leadership Basics)
2022	Agilt ledarskap - Fördjupningskurs (Agile Leadership Cont.)
2022	Agile at Work: Planning with Agile User Stories
2022	Agil förändringsledning (Agile Change Management)
2022	6 Sigma White Belt
2022	5S - Grundkurs (5S - Basics)
2022	Cross-Functional Improvement Teams
2021	Ledarskap - Grundkurs (Leadership - basics)
2021	Förändringsledning (Change Management)
2020	Projektleddning - Grundkurs (Project Management - Basics)
2020	Projektleddning - Fördjupningskurs (Project Management - Cont.)
2020	Agil projektleddning (Agile Project Management)

### LinkedIn Learning

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2022	Comparing Agile versus Waterfall Project Management
2021	Transitioning from Waterfall to Agile Project Management
2021	The Six Morning Habits of High Performers

### Volvo CE

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2017	Requirements - Writing Good Requirements
2016	Functional Safety

### Bosch

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2008	Spanish
2005	Combustion Engine Fundamentals, Braunschweig University

### Kibbutz Yagur

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1993-4	Agriculture and Field Crops - Rupin Institute
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## SOFTWARE SKILLS

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- System Weaver (dialects: Volvo CE. Volvo Buses, Volvo Cars)
- AutoSAR (fundamental)
- Functional Safety (including ISO 26262, working level, participated in some FMEA, design reviews, Safety Goals review)
- C programming (Arduino, Microcontrollers, Driveline development)
- Matlab & Simulink (coding & code generation, SW documentation)
- dSpace TargetLink, ControlDesk (Basic user level)
- Office tools, Corel, LaTeX, Google Docs, Visio, MS Office, OpenOffice, Atlantis Editor, extensive use of spreadsheet & Excel)
- CAN tools (Vector tools - CANalyzer, DB Editor, Elektra, Kvaser)
- Volvo Proprietary - KOLA (Basic knowledge), Engineering Tool (User)
- Operative systems (Android custom ROMs, Linux, Windows)
- Python (basic, self learning)
- Java (university level)
- CAD - AutoCAD, SolidWorks (Entry, university level)

### PERSONAL

As a person, I am often seen as a powerhouse and an enthusiastic tech-nerd. I thrive by letting my "creative Juices" out - cooking & baking for the family, handicraft in the backyard - building in wood and welding in metal, myself - optimal health, personal development, and my website with my blog pages, and translating (books and other documents)... but first and foremost a husband and father to 2 sons, who tends his family, raises his children.

Health, nutrition and sports (body-weight training) are also important cornerstones of my private life. Hence, Work/life balance is important, as it is to most people.

Overall, personal development is as high a priority in the chart and is woven into my life in many ways. At work, with my social skills, I adapt readily to the team and different roles, while keeping high integrity and humbleness.

## CONTACT

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