EDE DRINGS

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Design engineer connecting mechanical engineering and product design, from concept to product

EDUCATION

KTH Royal Institute of Technology — Stockholm, Sweden
M.Sc. Integrated Product Design — Expected 06/2027
Track: Industrial Design Engineering

Otto-von-Guericke-Universität Magdeburg — Magdeburg, Germany
B.Sc. Mechanical Engineering — 03/2025

- M.Sc. coursework: Advanced Product Design, Advanced Industrial Design Engineering, Product Innovation, Mechatronics in Product Design (Python, Arduino), Machine Design, Advanced Service Design
- M.Sc. management and methods: Project Management: Leadership & Control, Leading People & Organizations, Research Methodology, Eco Design, AI & Applied Methods (ongoing)
- B.Sc. focus on product development; coursework: Machine Design, Advanced Machine Elements, Mechanics, Thermal & Fluid Dynamics, Digital Product Development, Algorithms & Programming
- B.Sc. thesis on CFRP material substitution in wheel rim design, grade 1.1 (German scale); ranked among the top 10 % of mechanical engineering students (faculty reference)

PROFESSIONAL EXPERIENCE

Raiser GmbH & Co. KG — Magdeburg, Germany
Design Engineer — 03/2025 – 08/2025

- Designed machine parts and assemblies for automated friction welding systems, taking components from concept to production-ready documentation
- Drafted and reviewed ready-to-manufacture technical drawings
- Built functional prototypes to troubleshoot and improve existing applications
- Reported progress on time-critical projects directly to top management

Asphaltdreams UG — Magdeburg, Germany
Engineering Intern — 07/2024 – 10/2024

- Converted an aluminum rim model into a CFRP design and simulated load cases in Ansys
- Optimized rim geometry and fiber orientation in Ansys Composite (ACP) to reduce material use
- Developed a manufacturing strategy and cost-effectiveness analysis comparing RTM and TFP
- Validated the carbon rim via FEM and adjusted manufacturing parameters for series production
- Created requirements lists with relevant departments and drafted a quality management plan
- Supported quality inspection of aluminum rims and presented the final product strategy

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IFA Group Haldensleben, Germany
Cooperative Degree Student 08/2020 – 10/2024

- Operated CNC lathes in series production to tight tolerances and quality standards
- Trained as machine operator on lathe, milling and CNC machines alongside engineering studies
- Supported product development, taking components from design to manufactured part
- Combined shop-floor and development experience to design for manufacturability
- Gained insight into automotive drivetrain components and supply chains at a tier-1 supplier

ADDITIONAL EXPERIENCE

Mitchells & Butlers Magdeburg, Germany
Working Student – Service 06/2023 – 10/2024

- Managed up to 25+ tables simultaneously during peak hours in a high-volume restaurant
- Coordinated orders and kitchen communication; handled payments and resolved complaints

PROJECTS

B.Sc. Thesis – CFRP Wheel Rim Feasibility Study Magdeburg, Germany
Otto-von-Guericke-Universität Magdeburg 11/2024 – 02/2025

- Simulated a 28 % lighter wheel (11.4 → 8.2 kg) and a 60 % lighter rim star at equal safety
- Compared 3 CFRP systems with Al 6061 T6 in 8 load cases in Ansys ACP (Tsai-Wu criterion)
- Identified IM7/HEXPLY 8552 in a quasi-isotropic 0.8 mm [0/45] 30-ply laminate as best
- Recommended VARTM as the most economical route for small series of up to ~500 parts
- Selected materials in Ansys Granta EduPack and built the 3D geometry in Solid Edge

POC jr. – Brand Extension & Child Bike Seat Stockholm, Sweden
KTH Royal Institute of Technology 06/2026

- Conducted user research, incl. a survey with 157 participants in 4 countries and co-creation
- Designed a child bike seat with a carbon layer and airbag-inspired impact protection
- Modeled the seat in Autodesk Fusion and rendered it in Blender
- Created a brand extension and brand book with logo system, audience and competitor mapping
- Defined a product-as-a-service business model for renting high-quality baby products

Democratic Empowerment – Service Design Huddinge, Sweden
KTH × Huddinge Municipality 12/2025

- Assessed feasibility of service concepts for Huddinge Municipality (~114,000 residents)
- Applied a double-diamond process to support the 2030 goal of 82 % voter turnout
- Engaged residents with trigger materials, interviews and surveys on a sensitive topic
- Drove pragmatic prioritization to keep the team on schedule

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Object-Tracking Launcher – Mechatronics Stockholm, Sweden
KTH Royal Institute of Technology 10/2025 – 01/2026

- Co-developed an Arduino prototype that tracks a thrown object with infrared sensors
- Controlled motors based on the tracked throw to launch the object back to the user

Machine Learning Models – AI & Applied Methods Stockholm, Sweden
KTH Royal Institute of Technology 10/2026 – present

- Build machine learning models in Python that derive recommendations from datasets

LEADERSHIP & COACHING

Swedish Tennis Society Stockholm, Sweden
Tennis Coach 08/2025 – present

- Coach groups and individual players in structured sessions that accelerate skill development

MTC Germania 1926 Germany
Tennis Team Coach 04/2024 – 08/2025

- Coached the club's 3rd-division team, taking over with little prior coaching experience

SKILLS

CAD & rendering: Autodesk Inventor, Solid Edge, Autodesk Fusion, Blender
Simulation: Ansys Mechanical, Ansys Composite (ACP), CLT laminate analysis, Tsai-Wu failure criteria
Materials & manufacturing: CFRP, Granta EduPack, RTM/VARTM/TFP, CNC turning/milling, DFM
Programming & prototyping: Python (machine learning, coursework), Arduino, sensors, prototyping
Design: Human-centered design, user research, service design, branding, sketching, UI design
Methods: Requirements engineering, quality management, cost analysis, project management
Languages: German (native), English (C2), Swedish (A2, currently attending SFI)

CERTIFICATIONS

BCG – Introduction to Strategy Consulting

HONORS & AWARDS

Professional title “Ingenieur” (Ing.), awarded by Ingenieurkammer Sachsen-Anhalt, 09/2025