

# AXEL MAGNUSSON

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## EDUCATION

### Royal Institute of Technology (KTH)

*BSc in Material Design*

Stockholm, Sweden

*Expected August 2027*

- Planned MSc in Naval Architecture with specialization in Lightweight Structures
- BSc thesis on alternative cemented carbides for rock drilling applications (Sandvik Västberga)

## EXPERIENCE

### Summer Engineer

*Kanthal*

June 2025 – August 2025

*Hallstahammar, Sweden*

- Assembled and welded industrial heating elements in a production environment
- Performed thermal and electrical calculations to support heating element design
- Created and updated CAD drawings in SolidWorks

### Welder

*Ebm-papst*

June 2021 – July 2021

*Stockholm, Sweden*

- Welded industrial fan tunnel components
- Assisted in component design using SolidEdge
- Mounted components in pre-assembly workflow

## PROJECTS

### Metal Defect Detection using Machine Learning | *Python, TensorFlow*

Oct 2021 – Mar 2022

- Developed a machine learning model to classify six types of surface defects from metal images
- Produced a detailed report documenting model performance and dataset methodology

### Stock Evaluation Tool | *Python, Pandas, Numpy, API*

Sep 2020 – Jan 2021

- Built a Python-based tool for analyzing financial time-series and fundamentals using API data
- Code and documentation available [here](#)

## TECHNICAL SKILLS

**Programming:** Python, MATLAB

**Data & ML:** TensorFlow, Keras, Pandas, NumPy

**Engineering Tools:** SolidWorks, NX, SolidEdge, StarCCM+ **Manufacturing:** Welding, Product Assembly

## COMMUNITY & LEADERSHIP

### President

*KTH Basketball Club*

June 2021 – May 2023

*Stockholm, Sweden*

- Led board meetings and delegated responsibilities within the organization
- Organized inter-university tournaments and team events
- Served as primary liaison with sponsors and external stakeholders

### Aerodynamics & Composites Engineer

*KTH Formula Student*

Apr 2022 – Mar 2024

*Stockholm, Sweden*

- Optimized carbon fiber layering and composite structures
- Ran aerodynamic simulations using StarCCM+
- Designed aero package components in NX; managed integration using Teamcenter PLM