Arnout Groen

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Education

Amsterdam University of Applied Sciences **Sep 2022 – Aug 2026**
Bachelor of Mechanical Engineering - (Average: 7.5/10.0) *Amsterdam, The Netherlands*

Keizer Karel College **Sep 2017 – Aug 2022**
Secondary education (HAVO) – Major: Nature & Technology - (Average: 6.5/10.0) *Amstelveen, The Netherlands*

Skills

Design & CAD: Autodesk Inventor (incl. Nastran), AutoCAD, Fusion 360
Data & Programming: Python, Excel (advanced modeling), Power BI
Prototyping & Manufacturing: 3D printing, Laser cutting, CNC, CAM
Engineering Methods: GD&T, DFA, DFM, Tolerance Analysis, FMEA, STPA, Root Cause Analysis (RCA)

Projects

Unmanned Aerial Vehicle | *Inventor, Python, Merlin simulator* **Jun 2025**

- Simulated UAV aerodynamics in Python & Merlin, improving stability by ∼30% and achieving 34 m/s top speed
- Reduced structural weight by ∼25% using composites and structural analysis, maintaining a safety factor of 1.8
- Applied DFM/DFA and defined GD&T for key components & designed modular frame for easier access and servicing
- Integrated GPS, telemetry, and sensors for full autonomy with ±2 m waypoint accuracy & automated landing procedure

High End Bookshelf Speakers | *Inventor, Excel, Xsim, Fusion 360* **Jul 2024**

- Designed a 2-way speaker system, achieving a cost reduction of ∼50% compared to commercial alternatives
- Tuned electrical components using XSim, achieving ±3.5 dB response between 70 Hz–20 kHz for a balanced sound
- Designed a parametric speaker cabinet in Inventor, reducing time spent on iterations by ∼80% for rapid prototyping
- Identified and mitigated cabinet resonance via FEM modal analysis in Inventor Nastran
- Worked with a CNC manufacturer to produce cabinet parts from G-code, achieving sub-8 hour turnaround

Geolocation & market analysis | *Python, Excel, QGIS, Powerpoint* **Mar 2025**

- Conducted market and geospatial analysis to support investment decisions in high-demand regions
- Collected and processed data on 30,000+ POIs and other spatial-economic factors to extract valuable insights
- Collaborated with a 3-person team to integrate spatial, economic, and technical findings into a unified investor report
- Automated data cleaning in Python and visualized results with QGIS heatmaps and interactive dashboards

Work Experience

Machined4You **Mar 2025 – Present**
Project Engineer *Amsterdam, The Netherlands*

- Leading weekly design reviews and coordinating cross-functional feedback, reducing project delays by ∼30%
- Designing and reviewing mechanical assemblies for DFM, tolerance stack-up, and production alignment
- Analyzing market trends to support product strategy and investor materials

VOSTA LMG **Aug 2024 – Feb 2025**
Mechanical Engineer Intern *Hoofddorp, The Netherlands*

- Researched & developed an electric ship anchoring system increasing energy efficiency by ∼50% & reducing emissions
- Collaborated with 2 external suppliers and 3 internal departments to integrate off-the-shelf & custom components
- Wrote a comprehensive 40-page report detailing the R&D process to guide future electrification efforts

Certifications & Additional Training

Python for Engineers | *Python* **July 2024**

- Learned Python fundamentals, including data processing and working with key libraries (e.g., Pandas, NumPy)

Maintenance | *ISO maintenance & safety protocols* **Feb 2024**

- Applied Root Cause Analysis (RCA) and FMEA to identify and prevent mechanical failures
- Trained in industrial maintenance workflows and ISO-aligned system inspections