

Michael Aksen

FE Certified Mechanical Engineer

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EDUCATION

Rensselaer Polytechnic Institute (RPI), Troy, NY
Master of Engineering in Mechanical Engineering

May, 2023
GPA: 3.3/4.0

Rensselaer Polytechnic Institute (RPI), Troy, NY
Bachelor of Science in Mechanical Engineering

May, 2022
GPA: 3.6/4.0

PROJECTS

Computerized Industrial Bandsaw — The Factory Amsterdam August 2021 — May 2023

- Upgraded a 40-year-old industrial bandsaw to the digital age by replacing its mechanical relay logic with a PLC and ladder logic, increasing throughput and reducing downtime
- Self-taught PLC programming, Industrial wiring and logic diagrams, and IIOT
- Connected a cloud data model to digital and analog machine data, leading to smart manufacturing insights

300 Toy Airplanes — Manufacturing Processes and Systems Lab I & II, RPI Sept 2021 — May 2022

- Co-led a team of 12 students in the fabrication of 300 toy airplanes using various industrial processes
- Engineered a forming die to produce 300 steel wheel wires, adhering to DFM principles
- Programmed a pick-and-place robot to assemble injection-molded wings with a 95% success rate

Mini-Segway Controller — Mechatronics, RPI Jan 2023 — May 2023

- Developed an electromechanical control system to balance a mini-Segway for over 2 hours using a PID controller implemented in MATLAB and Simulink.

iPhone Cooling System — Advanced Heat Transfer, RPI Jan 2023 — May 2023

- Designed and analytically calculated the effectiveness of a finned heat sink to cool a mobile phone
- Designed a flow loop to cool a phone and evaluated the control system with a numerical ODE solver

WORK EXPERIENCE

United Aircraft Technologies, Associate Mechanical Engineer, Pittsfield, MA Oct 2023 — July 2024

- Supported the Smart Clamp pilot program in Madison, WI by performing preliminary Ansys FEA analysis, coordinating with vendors, and 3D printing nylon prototypes
- Developed 2D and 3D CAD drawing templates with automated property values in SolidWorks (SW) to standardize CAD drawings across our enterprise
- Created proprietary part assemblies in SW, with corresponding drawings and BoMs, for an Army contract
- Completed Ansys Engineering Simulations and SolidWorks training courses; received CSWA certificate

The Factory Amsterdam, Engineering Intern/Researcher, Amsterdam, NY June 2021 — May 2023

- Enhanced the operational capabilities of a 40-year-old industrial bandsaw by integrating a PLC and bridging the IT/OT gap by connecting the saw to a cloud-based data historian
- Designed a CNC tooling fixture to machine nerf gun components

USPS Engineering, Vehicle Engineering Intern, Merrifield, VA Jan 2020 — Apr 2020

- Engineered and welded a steel assembly to assess the performance of an autonomous delivery vehicle

COMPETENCIES & AWARDS

Engineering Software: SolidWorks, NX, NX Nastran, Simulink, Ansys FEA, CLICK PLC Programming

Manufacturing: 3D Printing, Machining, MIG Welding, Design for Manufacturing, Value stream mapping

Programming: Java, Python, PLC Ladder Logic, Arduino C, MATLAB

Certifications: FE Certified, CSWA-Mechanical Design, Ansys STK Level I

Awards: Gene Haas Manufacturing Award Recipient (2021), RPI Elevator Pitch Competition 3rd Place (2020)