Michael Aksen

FE Certified Engineer

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EDUCATION

Rensselaer Polytechnic Institute (RPI), Troy, NY — May, 2023
Master of Engineering in Mechanical Engineering — *GPA: 3.3/4.0*

Rensselaer Polytechnic Institute (RPI), Troy, NY — May, 2022
Bachelor of Science in Mechanical Engineering — *GPA: 3.6/4.0*

PROJECTS

Computerized Industrial Bandsaw — The Factory Amsterdam — June 2021 — May 2023
- Replaced the mechanical relay logic of an unreliable 40-year-old industrial bandsaw with a PLC and ladder logic that improved throughput and reduced downtime by >50%
- Mapped digital/analog machine data to a cloud-based data model to develop smart manufacturing insights

Mini-Segway Controller — Mechatronics, RPI — Jan 2023 — May 2023
- Balanced a mini-Segway for over 2 hours by applying an electromechanical ODE model and a PID control system implemented in MATLAB and Simulink

iPhone Cooling System — Advanced Heat Transfer, RPI — Jan 2023 — May 2023
- Created a finned heat sink design and a flow loop design to cool an iPhone 14 Pro
- Evaluated heat sink with Nastran thermal FEA solver & flow loop with MATLAB numerical ODE solver

300 Toy Airplanes — Manufacturing Processes and Systems Lab I & II, RPI — Sept 2021 — May 2022
- Collaborated with a team of 12 students to fabricate 300 toy airplanes using various industrial processes
- Iteratively designed and built a forming die to make 300 steel wheel axles under DFM considerations
- Programmed pick-and-place robot operations to assemble injection-molded wings with a 95% success rate

WORK & LEADERSHIP EXPERIENCE

United Aircraft Technologies, *Mechanical Engineering Intern,* Pittsfield, MA — Oct 2023 — Present
- Utilized Ansys FEA and SolidWorks CAD tools to work on a proprietary electrical clamping mechanism

The Factory Amsterdam, *Engineering Consultant,* Amsterdam, NY — June 2021 — May 2023
- Implemented a PLC with ladder logic to optimize operations of a 40-year-old industrial bandsaw for cutting
- Designed a fixture in SolidWorks to mill aluminum components in a 5-axis CNC Mill

RPI Habitat for Humanity, *President*, RPI — Aug 2018 — May 2023
- Coordinated with three Habitat chapters to organize builds for the club members
- Led club in meetings and organized club activities during the ’20 - ‘23 school years

USPS Engineering, *Vehicle Engineering Intern,* Merrifield, VA — Jan 2020 — Apr 2020
- Designed and MIG-welded a steel assembly to evaluate the efficacy of an autonomous delivery vehicle

BrightLogic, *Software Engineering Intern,* Midland Park, NJ — Sept 2017 — July 2018
- Developed a back-end interface for application logs collection on a mobile app using JavaScript and C#

COMPETENCIES & AWARDS

Engineering Software: NX, NX Nastran, Simulink, SolidWorks, Ansys FEA, AutoCAD, STK, Mastercam
Manufacturing: 3D Printing, Manual machining, MIG Welding, Soldering, Waterjet, DFM, VSM, MES, gd&t
Programming: Java, Python, PLC Ladder Logic, MATLAB, Git, Arduino C, SQL, Minitab
Certifications: FE Certified, Systems Tool Kit (STK) Level I Certified
Awards: ‘21 Gene Haas Manufacturing Award Recipient, ’20 RPI Elevator Pitch Competition 3rd Place