

ANDREW OLIJARCZYK

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SUMMARY

Mechanical Engineering graduate (RPI) with 6 years of hands-on HVAC installation, maintenance, and troubleshooting experience, currently preparing for the FE Exam. Combines formal engineering design skills, including CAD modeling, thermal analysis, and controls, with practical, code-compliant electrical and mechanical systems experience gained through independent projects. Looking to apply this blend of field and design experience to an entry-level mechanical engineering role.

EDUCATION

Rensselaer Polytechnic Institute (RPI) — Troy, NY

June 2026

B.S., Mechanical and Aeronautical Engineering

- Currently preparing for the FE (Fundamentals of Engineering) Exam

ENGINEERING PROJECTS

UAV Capstone Design Project

- Led design and analysis of an unmanned aerial vehicle using Siemens NX, Simcenter, and FlightStream, covering aerodynamic performance and structural modeling

Solar Panel Heat Sink Thermal Analysis

- Modeled and evaluated heat transfer performance of a solar panel heat sink design using Python

PID Controller Mass-Balancing System

- Designed and tuned a PID control system for a mass-balancing application using MATLAB/Simulink

PROFESSIONAL EXPERIENCE

HVAC Technician — Demasco, Rockland, NY

2020 – Present

- Perform installations, preventive maintenance, and troubleshooting on residential and commercial HVAC systems
- Diagnose mechanical and electrical system issues to identify root causes and implement effective repairs
- Read and interpret blueprints, wiring diagrams, and manufacturer specifications to guide installation and service work
- Communicate directly with customers and team members to explain system issues, repair options, and maintenance recommendations
- Built 6 years of hands-on experience with mechanical, electrical, and control systems in real-world building environments

INDEPENDENT PROJECTS

Residential 240V Hot Tub Electrical Installation

- Designed and installed a dedicated 240V circuit for a hot tub, including GFCI protection and code-compliant underground wiring depth, completing the project under budget and in full compliance with electrical code

Vehicle Electrical & Systems Integration — 2019 Toyota Corolla

- Independently designed and installed multiple aftermarket electrical and mechanical upgrades, including remote start, heated seats and steering wheel, a CarPlay head unit retrofit, subwoofer audio system, hardwired dash cam/radar detector, and an automated window control system

TECHNICAL SKILLS

CAD / Design Software: Siemens NX, Simcenter, FlightStream, AutoCAD, Revit

Programming / Analysis: MATLAB, Simulink, Python

Certifications: FE Exam (In Progress)

Technical Skills: HVAC systems (installation, maintenance, troubleshooting), mechanical system design, thermal analysis