

Filip Nowicki

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EDUCATION

Carnegie Mellon University

Master of Science in Mechanical Engineering

Selected coursework: DIY Design & Fabrication, ML and AI for Engineers, Robot Dynamics.

Pittsburgh, PA

May 2022

Warsaw University of Technology

Bachelor of Science in Aerospace Engineering

Selected coursework: Machine Design, Aerodynamics of Vehicles, Mechanics of Structures.

Warsaw, Poland

Feb 2021

The London School of Economics and Political Science

The General Course

Selected coursework: Innovation and Technology Management, Information Systems.

London, UK

Jun 2020

WORK EXPERIENCE

Metalbud Company

Design Engineering Intern

Podlas, Poland

Jul 2019 – Sep 2019

- Collaborated on team projects of industrial food processing machines: worked with mechanical, structural and automation engineers to research and conceptualize solutions, build parts in CAD, and create technical drawings.
- Identified an opportunity to improve profitability of the KN-90 industrial cutter; carried out an independent rotor design project, and reduced production costs by over 60%.

Manufacturing Engineering Intern

Jul 2018 – Sep 2018

- Automated production processes of over 80 food processing machinery parts, previously manufactured manually.
- Created toolpaths in CAM following technical requirements for each part, processed instructions into G-code, and forwarded these programs for fabrication.

PROJECTS

Formula SAE Project

Warsaw University of Technology

Fall 2018 – Spring 2019

Warsaw, Poland

- Designed and optimized a rear wing of a Formula Student car for downforce and drag characteristics, and structural strength using CAD, CFD and FEM software.
- Led a 3-person team researching the rear wing in an aerodynamic tunnel and analyzing gathered data; identified aerodynamic characteristics, examined CFD-reality correlation, and found the wing's most efficient setup.
- Cooperated with a team of 40 students and turned a concept into a car participating in FSAE Michigan 2019.

Aircraft Design Academic Project

Warsaw University of Technology

Fall 2018 – Spring 2019

Warsaw, Poland

- Conducted a single-seater jet-powered combat aircraft design from scratch to a CAD model; incorporated freeform shape modeled outside surfaces and wing and horizontal stabilizer internal structures in 3D geometry.
- Researched and incorporated industry applications of engines, combat equipment, and avionics to conduct a mass analysis indicating the aircraft's stability regions.
- Analyzed aircraft's aerodynamic characteristics, performance, and structural loads, in compliance with FAA Part 25 regulations and according to aircraft design literature, to produce a comprehensive conceptual project.

SKILLS

Engineering Software: Advanced – ANSYS Fluent, Siemens NX, Autodesk Inventor; Intermediate – ANSYS Mechanical APDL, ANSYS Workbench, EDGECAM; Basic – MATLAB.

Programming Languages: Intermediate – Python; Basic – C, C++.

Languages: English (fluent), Polish (native), French (conversational), Russian (conversational).