Filip Nowicki

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EDUCATION

Carnegie Mellon University   Pittsburgh, PA, USA
Master of Science in Mechanical Engineering, expected 4.0/4.0   May 2022
Selected coursework: AI & ML for Engineers, Numerical Methods, Robot Dynamics & Analysis.

Warsaw University of Technology   Warsaw, Poland
Bachelor of Science in Aerospace Engineering, 4.21/5.0   Feb 2021
Selected coursework: Aircraft Design, Mechanics of Flight, Rotorcraft Aeromechanics.

The London School of Economics and Political Science   London, UK
The General Course, First Class Honours in 6/7 courses   Jun 2020
Selected coursework: Innovation and Technology Management, Information Systems.

PROJECTS

Machine Learning Project   Fall 2021
Carnegie Mellon University   Pittsburgh, PA, USA
- Led a team of 4 in performing feature extraction on artwork of the 50 most influential artists and applied Machine Learning techniques for <u>image classification</u>.
- Implemented 5-fold learning schemes for shallow ML algorithms, such as KNN, Random Forest, SoftMax, Gaussian Naïve Bayes, as well as more advanced techniques, including AdaBoost, SVM, CNN.

Undergraduate Thesis Project   Fall 2020
Warsaw University of Technology   Warsaw, Poland
- Developed an adverse event analysis procedure with the <u>Monte Carlo method</u> to improve tools for assessing safety
- Evaluated aircraft accident risk and injury risk in a real-life situation using the developed method and performed a sensitivity analysis in Excel to offer recommendations of how to decrease mortality risk by 80%.

Formula SAE Project   Fall 2018 – Spring 2019
Warsaw University of Technology   Warsaw, Poland
- Designed and optimized a <u>rear wing of a Formula Student car</u> for downforce, 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.

WORK EXPERIENCE

Metalbud Company   Podlas, Poland
Design Engineering Intern   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 <u>reduced production costs by over 60%</u>.

Manufacturing Engineering Intern   Jul 2018 – Sep 2018
- Automated production processes of <u>over 80 food processing machinery parts</u>, previously manufactured manually.
- Created toolpaths in CAM following technical requirements for each part, processed instructions into G-code, and forwarded these programs for fabrication.

SKILLS

Programming Languages: Advanced – MATLAB, C++, Python (NumPy, Matplotlib, scikit-learn, tensorflow, keras, pandas); Basic – C.
Engineering Software: Advanced – ANSYS Fluent, Siemens NX, Inventor, Solidworks; Intermediate – ANSYS Package.
Languages: English (fluent), Polish (native), French (conversational), Russian (conversational).