Anton Yanovich

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https://belivan.github.io/ | https://github.com/belivan

Education

Carnegie Mellon University — Pittsburgh, PA
Master of Science in Mechanical Engineering | *GPA: 3.96/4.0* — May 2024

The George Washington University — Washington, DC
Bachelor of Science in Mechanical Engineering, Minor in Business | *GPA: 3.68/4.0* — May 2023

Completed Coursework: Modern Control Theory, Nonlinear Control, Machine Learning, Computer Vision.
Current Coursework: Visual Learning & Recognition, Robot Learning, Advanced Engineering Computations (C/C++).

Selected Projects

Autonomous Vehicle Control — Mar. 2024 - Present
AirLab, Carnegie Mellon University — *C++, Python, ROS*
- Implementing Model Predictive Path Integral (MPPI) control framework in C++ using existing Python architecture.
- Enabling fast and parallel processing capabilities, significantly improving the vehicle's real-time decision-making and performance.

Synthetic Dataset Generation — Feb. 2024 - Present
AirLab, Carnegie Mellon University — *Python, PyTorch*
- Developing an efficient RGB to Thermal Infrared (TIR) translation algorithm using generative models.
- Generating a large-scale synthetic dataset to train and validate the vehicle's perception system, reducing the need for real-world data collection.

Thermal Sensing Integration — Oct. 2023 - Present
AirLab, Carnegie Mellon University — *SOLIDWORKS, C++, Python, ROS*
- Leading stereo thermal sensor integration to elevate autonomous navigation capabilities under varied weather conditions.
- Designing, fabricating custom sensor mounts, and ensuring data stream compatibility with the vehicle's existing systems.

IoT Public Health Device Concept — Aug. 2022 - May 2023
Capstone Design Project, George Washington University — *SOLIDWORKS, Arduino, C++*
- Spearheaded the multidisciplinary design and development efforts.
- Designed physical prototypes, demonstrating concept materialization proficiency.
- Conducted business market research, enhancing the project's commercial viability in the context of entrepreneurial start-up contests.

Experience

Biofluids and Dynamics Lab, George Washington University — Washington, DC
Summer Research Fellow — *June 2021 - Aug. 2023*
- Led the design and assembly of hardware components for cardiovascular flow modeling experiments, showcasing strong project management and practical engineering expertise.
- Collaborated closely with machine shop staff and mentors to enhance the efficiency of manufacturing and assembly processes, resulting in significant improvements to the overall project timeline.

Drone Point Solutions — Washington, DC
Product Engineering Intern — *Jan. 2022 - Sept. 2022*
- Created insight into the EV, solar power, and power management industries by performing research on relevant technologies.
- Presented viable designs and product solutions to meet customer needs.
- Gained experience in the management and strategy of a growth-stage start-up company.

Leadership & Volunteering

Section Chair — Washington, DC
American Society of Mechanical Engineers (ASME), George Washington University — *Sept. 2021 - May 2023*
- Successfully revitalized and led the ASME student chapter, significantly enhancing its presence within the university community.
- Developed and maintained strong relationships with faculty and peers, supporting the chapter's networking and professional development opportunities.

Skills

Programming Languages:	Python, C/C++, JAVA, LaTeX, MATLAB, HTML
Libraries:	PyTorch, Numpy, Pandas, OpenCV, OpenGL, Matplotlib, Scipy
Environment/Tools:	Windows, Linux, ROS, AWS, Jupyter, MS Office
CAD Tools:	Inventor, SOLIDWORKS, SolidEdge, SketchUp
Languages:	English (fluent), Russian (native), French, Romanian.