Maksim Dziatlovich

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Education

Northwestern University Evanston, IL
BS/MS - Mechanical Engineering/Robotics; GPA: 3.83 *Sep 2019 - Jun 2023 (anticipated)*

Experience

Norris University Center Evanston, IL
Production Assistant (Part-time) *March 2020 - Ongoing*

- **Event Organization**: Assisted full-time production team with setting up and tearing down event locations.
- **Methods and Safety**: Introduced more efficient and safer ways of handling and storing equipment.

Academic Support and Learning Advancement Center Evanston, IL
Engineering Analysis Tutor (Part-time) *November 2021 - Ongoing*

- **One-on-one peer tutoring**: Helped multiple students to develop new learning strategies for efficiently studying lecture material
- **Noticeable Improvement**: Over 10 students have improved their academic standing as a result of academic guidance.

Criola, LLC Minsk, Belarus
Technical Consultant (Intern) *September 2020 - June 2021*

- **Equipment and Products**: Researched and provided guidance on the optimal solutions for cattle care and milk production.
- **Corporate Website Development**: Customer interest increased by 20% the first month after website deployment
- **Impact**: Reduced company expenses for Q4 of 2020 by over $6,000 by securing more effective contracts with foreign preservative dealers.

Projects

Self-driving Robot (Raspberry Pi + PIC32) *February 2022 - June 2022*

- Designed and prototyped a car-like robot (Solidworks, Eagle, CAM)
- Achieved less than 15% error in position control, and less than 5% error in current control
- In the test scenario of following a line on the track, the robot achieved a 95% success rate of completing the track.

Custom Gibson Les Paul Replica *March 2020 - Ongoing*

- Designed a CAD model and toolpaths of a Gibson Les Paul electric guitar in Fusion 360.
- Manufactured on a CNC router using the CAM files.

Aperture Science Sentry Turret Replica (Portal 2) *August 2021 - Ongoing*

- Using in-game 3D model as a reference, designed a CAD model for a sentry turret for further 3D printing.
- To be equipped with 3 motors (x,y,z) for each arm, driven by a Raspberry Pi that processes the image from the camera to identify a target and perform various actions (e.g. target tracking).
- The goal is to have the turret correctly identify the target in 9 cases out of 10, as well as perform the actions with a reasonable accuracy to the in-game canon.

Research

Fluid motion at the interface boundary in pipe flow: Ongoing research to investigate the rate of and the conditions for the flow of fluids on the solid-fluid interface in pipes. Currently investigating possible applications of random walks and decay of metastable states. (December, 2021)

Skills

Modelling and Simulation:	Siemens NX, Solidworks, Inventor, Fusion 360, AutoCAD, CoppeliaSim, Eagle
Manufacturing:	Machining, CNC Machining, 3D Printing, Casting, Metal Forming, Injection Molding, Soldering, Rapid Prototyping
Programming and Frameworks:	Python, Matlab, HTML, CSS, JavaScript, Vue, ROS
Typesetting:	Microsoft Office, LaTeX
Spoken Languages:	English, Russian, Belarusian, German (upper-intermediate), Japanese (intermediate)
Soft Skills:	Leadership, Event Management, Writing, Public Speaking, Time Management

Honors and Awards

Northwestern Scholarship, Davis UWC Scholar, Buffet Institute Grant *September, 2019*
Second Place at UWC Changhu China Hackathon *March, 2019*
Repeated Nominee for End-of-Semesters Honors