Vladyslav Havriutkin

Atlanta, GA

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Education

Georgia Institute of Technology — Master of Science in Computer Science

August 2025 - May 2027
Atlanta, USA

Kharkiv National University — Bachelor of Science in Computer Science
GPA: 3.8/4.0

September 2021 - June 2025
Kharkiv, Ukraine

Skills and Certifications

Languages:	**C/C++**, **Python**, **JavaScript**/TypeScript, SQL, Java, HTML, Julia
Frameworks:	**Scikit, NumPy, TensorFlow**, Pandas, Spring Boot, Node.js, **React.js**, Express.js, TailwindCSS, FramerMotion
Tools:	Docker, **Git**, CMake, Linux, Kubernetes, Postman, **ROS**
Certifications:	Full-Stack Engineer (Codecademy), Object-Oriented Programming (UAS Wildau), Computability Theory (UAS Wildau)
Other:	**Agile**, Multilingual (English, Ukrainian), Abstract/Linear Algebra, Projective Geometry

Experience

Georgia Institute of Technology — Research Assistant   January 2023 - Present
- Maintained GTDynamics library in C++ by applying factor graph methods to robotic kinodynamics
- Implemented AI improvements to math models with direct impact in 3D scene reconstruction, robotics and signal processing
- Optimized solvers of non-linear systems in 3D reconstruction by 20% with a PyTorch-based classification model
- Applied Monodromy groups to solve inverse kinematics of robotic arms through Macaulay2 code
- Utilized OOP principles to streamline generation of Doppler equations

Nebo Records — Software Engineer   January 2024 - July 2024
- Implemented a scraping solution for media platforms to track followers of popular music artists using JavaScript and Python
- Achieved 30% increase in artist engagement metrics by collecting information about active followers
- Used Chrome Extension API to efficiently bypass bot detection on Instagram and TikTok for the benefit of consenting users
- Implemented an interactive landing page with React, TypeScript and TailwindCSS

Czech Technical University in Prague — Research Intern   May 2022 - January 2023
- Developed a DH parameters-based simulator of kinematics of robotic arms using Julia programming language
- Implemented a data and math expression converter between Julia and Maple programming languages
- Implemented unit tests for perspective pinhole camera model calibration

Projects

Machine Learning in Computer Algebra
- Designed and developed pruning classifier to speed up COLMAP pipeline using TensorFlow
- Described and used a 'straightening' group action to reduce dimensionality of the problem using linear algebra
- Wrote undergraduate thesis based on the achieved results

FPS Simulation In Console
- Developed a 3D console simulation using C++
- Used ray casting technique to render the 3D scene onto the console screen
- Used ASCII rendering for visual depth

Spinning Donut
- Implemented rotating donut in console using C++
- Utilized projective geometry and SO(3) group to describe rotation

Other

Founding Member & Public Communication Officer at the Ukrainian Club in Georgia Institute of Technology