

Christos Sevastopoulos *Machine Learning/Computer Vision Engineer*

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🇺🇸 US Permanent Resident (Green card holder) 🏠 Christos Sevastopoulos

EDUCATION

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| Ph.D. in Computer Engineering , <i>University of Texas at Arlington</i> | 08/2019 – 12/2023 |
| • Computer Vision, Robotics, Deep Learning | Arlington, Texas |
| MS in Robotics , <i>University of Bristol</i> | 02/2017 |
| • Autonomous Vehicles & Control | Bristol, UK |
| BS in Physics , <i>National and Kapodistrian University of Athens</i> | 07/2015 |
| • Quantum Computing & Information | Athens, Greece |

PROFESSIONAL EXPERIENCE

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| Postdoctoral Researcher , <i>University of Illinois Chicago</i> | 01/2024 – 02/2025 |
| • Led projects applying Diffusion and Transformer-based models to tackle image super-resolution and signal denoising challenges in medical imaging. Enhanced diagnostic accuracy by integrating PubMedBERT, utilizing text-based records from 200 patients to provide richer, vision/language insights. | Chicago, IL |
| • Mentored 8 PhD students, providing guidance on research methodologies and Machine Learning technical skills. | |
| • Collaborated with interdisciplinary teams from the medical and mechanical domains. | |
| Machine Learning Intern , <i>GN Group</i> | 05/2022 – 08/2022 |
| • Built a scene understanding framework using SoundNet, CNNs, and YOLO to identify and visualize important sound sources in audiovisual inputs. | Chicago, IL |
| • This work helped improve how hearing aids distinguish between environmental sounds, making it easier for users to focus on what matters most in noisy settings. | |
| Machine Learning Intern , <i>NCSR "Demokritos"</i> | 05/2021 – 08/2021 |
| • Designed indoor and outdoor simulation environments using the Unity game engine for mobile-robot navigation and Deep Learning experiments. | Athens, Greece |
| Robotics Researcher , <i>NCSR "Demokritos"</i> | 05/2018 – 07/2019 |
| • Led a research project on traversability estimation for Dr. Robot's Jaguar navigating outdoor environments, resulting in an academic publication on novel environmental perception techniques. | Athens, Greece |
| Build & Test Engineer , <i>Speedcast Ltd.</i> | 09/2017 – 04/2018 |
| • Set up and configured Very Small Aperture Terminal (VSAT) systems to provide reliable internet and telecommunication services for marine vessels. | Athens, Greece |

SKILLS

Programming Languages: Python, C++, MATLAB, SQL

Libraries & Frameworks: PyTorch, CUDA, Keras, Tensorflow, NumPy, Pandas, Scikit-learn, Seaborn

Tools & Software: Apache Spark, Kubernetes, Git, Docker, Linux, AWS Sagemaker, ROS

Computer Vision: OpenCV, CNN architectures (ResNet, Inception), object detection (YOLO, Faster R-CNN, SSD), segmentation (U-Net, Mask R-CNN, Segformer), image processing techniques

Natural Language Processing: Transformers (BERT models, GPT), Word2Vec embeddings, text preprocessing, CLIP

Sensors & Hardware: RGB-D Cameras, 1D Laser, LiDAR, IMU, NVIDIA Jetson

NOTABLE PUBLICATIONS

- Few-shot Traversability Segmentation of Indoor Robotic Navigation with Contrastive Logits Align**, *IEEE CASE* 2024 2024
Qiyuan An, Christos Sevastopoulos, Farnaz Farahanipad, and Fillia Makedon
- Learning Indoors Free-Space Segmentation for a Mobile Robot from Positive Instances**, 2023
2023 Seventh IEEE International Conference on Robotic Computing (IRC), 21-24
Christos Sevastopoulos, Joey Hussain, Qiyuan An, Stasinos Konstantopoulos, Vangelis Karkaletsis, Fillia Makedon
- Enhancing Robustness of Indoor Robotic Navigation with Free-Space Segmentation Models Against Adversarial Attacks,,** 2023
2023 Seventh IEEE International Conference on Robotic Computing (IRC)
Qiyuan An, Christos Sevastopoulos, Fillia Makedon
- Learning Indoors Free-space Segmentation for a Mobile Robot from Positive Instances**, 2023
2023 Seventh IEEE International Conference on Robotic Computing (IRC)
Christos Sevastopoulos, Qiyuan An, Joey Hussain Stasinos Konstantopoulos, Vangelis Karkaletsis, Fillia Makedon
- Indoors Traversability Estimation with RGB-Laser Fusion**, *IEEE CASE* 2023 2023
Christos Sevastopoulos, Michail Theofanidis, Aref Hebri, Stasinos Konstantopoulos, Vangelis Karkaletsis, Fillia Makedon
- Towards Safe Visual Navigation of a Wheelchair using Landmark Detection**, 2023
MDPI Technologies
Christos Sevastopoulos , Mohammad Zaki Zadeh , Michail Theofanidis, Sneha Acharya, Nishi Patel, Fillia Makedon
- An RGB-D Fusion System for Indoor Wheelchair Navigation,,** 2023
ACM Pervasive Technologies Related to Assistive Environments
Christos Sevastopoulos, Sneha Acharya, Fillia Makedon
- A Survey of Traversability Estimation for Mobile Robots**, 2022
IEEE Access, Volume 10
Christos Sevastopoulos, Stasinos Konstantopoulos

SERVICE

- Reviewer**, *IEEE Robotics and Automation Letters (RA-L)* 2024 – 2025
- Reviewer**, *IEEE International Conference on Intelligent Robots and Systems (IROS)* 2023
- Reviewer**, *Journal of Field Robotics* 2022 – 2023
- Session Chair/Coordinator**, 2020 – 2023
ACM Pervasive Technologies Related to Assistive Environments Conference

TEACHING EXPERIENCE

- Teaching Assistant** 2019 – 2023
UTA - CSE-5324: Software Engineering, Analysis, Design & Testing (Android Development)
UTA - CSE-2315: Discrete Structures

AWARDS

Highest Impact Paper Award, <i>UT Arlington</i>	2023
For presenting my work "Learning Indoor Free-space Segmentation for a Mobile Robot from Positive Instances" among 22 PhD students. This work helps identify free-space for a mobile robot in a cluttered environment. Prize of \$400	
Dissertation Fellowship Award, <i>UT Arlington</i>	2023
Summer Fellowship Award for a total of \$8,000	
Dean's Award, <i>UT Arlington</i>	2023
For research/travel purposes total of \$1,000	
Best Student Paper Award	2023
For the 'An RGB-D Fusion System for Indoor Wheelchair Navigation' paper	