

JAYACHANDHRAN SARAVANAN

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 [Jayachandhran Saravanan](#) |  [svjai](#) |  [research gate](#) |

Toronto, Ontario - M6N 1G6, Canada

PROFESSIONAL SUMMARY

Innovation-driven applied researcher, focused on designing, validating machine learning and deep learning systems for real-world deployment. Strong expertise in rapid prototyping, data-centric experimentation, and pragmatic pipeline integration. Currently developing depth in large-scale 3D point-cloud analysis and complex industrial sensing data. Motivated by problems at the intersection of research rigor, practical constraints, and scalable workflows.

PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, R=FEATURED REPORT

- [P.1] Saravanan, J., Venkatachalam, J., Ravi, P., APS, V., Sivakumar, T. (2024). **Title of Patent. Hand Launchable Copter System for Surveillance.** India Patent Office. Patent No.: 529771. Application No.: 202141029531. Published: March 22, 2024.
- [J.1] Saravanan, J., et al. (2024). **Clinical validation of an artificial intelligence-based cataract screening solution using smartphone images.** In *International Journal of Advances in Medicine*, Vol. 11, Issue 2, January 2024. DOI: 10.18203/2349-3933.ijam20240007
- [R.1] Saravanan, J., et al. (2024). **Selected applied AI project featured in India's 75@75 AI Journey.** In *Ministry of Electronics and Information Technology (MeitY), Government of India.*
- [C.1] Saravanan, J., et al. (2024). **Imposter Syndrome Comparison Map Utilization of Assistive Technology.** *Leveraging Open Data Analytics and Machine Learning to Improve Mental Health Research and Innovation*, Canada, July 2024. DOI: 10.48448/2mgs-jk17.

RESEARCH EXPERIENCE

- **Research & Innovation Operations, Lambton College**  Apr 2025 - Present
Sarnia, ON, Canada
Researcher II
 - Leading applied ML research on large-scale 3D point-cloud and LiDAR datasets, spanning data handling pipelines, model training, benchmarking, and evaluation.
 - Designed scalable architectures for segmentation, denoising, and registration of datasets exceeding 100GB, emphasizing robustness and usability under real-world constraints.
 - Translated experimentation and rapid prototyping workflows into production-oriented modules supporting industrial research initiatives.
- **Research & Innovation Operations, Lambton College**  Dec 2024 – Apr 2025
Sarnia, ON, Canada
Research Assistant (Co-op)
 - Orchestrated deep learning frameworks under memory and cloud-native, containerized ML solutions with analytics and reporting layers.
 - Enhanced object detection pipelines by integrating PointNet with RANSAC-based geometric reasoning.
 - Improved computational efficiency by combining Poisson Surface Reconstruction, voxel grid segmentation, and Gaussian filtering for industrial digital-twin and predictive maintenance use cases.
- **Research & Innovation Operations, Lambton College**  Dec 2023 – Apr 2025
Sarnia, ON, Canada
Research Student
 - Developed a synthetic dataset simulating real-world financial transactions, achieving approximately 70% similarity to observed distributions.
 - Refined and validated over 179,000 text records for QA testing, benchmarking ML model response accuracy.
 - Improved model reliability and operational efficiency through gradient-boosted and neural models, synthetic data augmentation, and automated evaluation workflows, enabling sub-second to sub-5-second inference across datasets ranging from hundreds of thousands to millions of records.
- **STEM Fellowship, Toronto** Oct 2024 – Sep 2025
Remote / Canada
Data Science Committee
 - Supported a Canadian registered charity advancing youth-led scholarship through the principle of “crowdsourcing science,” helping connect and empower young innovators.
 - Assisted with outreach efforts to grow participation in research challenges, scholarly writing competitions, and mentorship-oriented programs.
 - Contributed to research outreach initiatives through the Data Science Committee, supporting dissemination of applied ML concepts and student engagement.

INDUSTRY EXPERIENCE

- **Logy.AI** 
Research & Development Engineer
 - Engineered and deployed applied deep learning systems for medical diagnostics, bridging research prototypes with clinical workflows.
 - Contributed to the design and integration of computer vision-based health screening solutions within a production platform.
 - Supported end-to-end development of an AI-enabled healthcare system impacting over 2 million patients through scalable deployment.

Sep 2022 – Apr 2024

Hyderabad, India
- **Tamil Nadu e-Governance Agency (Center of Excellence)** 
Senior Software Developer
 - Developed and supported applied AI systems for large-scale public-sector platforms, emphasizing reliability, scalability, and operational robustness.
 - Contributed to computer vision and data-driven solutions deployed across healthcare and agriculture services within government-to-government (G2G) systems.
 - Worked on population-scale public health platforms during the COVID-19 response, supporting monitoring and resource coordination under high-load conditions.

Month Year - Month Year

Remote

TEACHING EXPERIENCE

- **Lambton College in Toronto (LCIT) Tutoring Centre**
Teaching Assistant
 - Mentored students in applied AI and machine learning coursework, focusing on translating theoretical concepts into working code and reproducible experiments.
 - Emphasized structured problem formulation, rapid prototyping, and clear technical communication aligned with industry and research expectations.

May 2024 – Jan 2025

Toronto, ON, Canada

EDUCATION

- **Lambton College**
PGDM— Artificial Intelligence & Machine Learning
 - GPA: 3.7/4.00

Sep 2023 – Apr 2025

Toronto, ON, Canada
- **Anna University**
Bachelor of Engineering — [Mechtronics Engineering]
 - Grade: 90.1%

Aug 2016 –May 2020

Tamil Nadu, India

SKILLS

- **Programming Languages:** Python, C++, Embedded C, R, Bash
- **Web Technologies:** REST APIs, HTML/CSS, JavaScript, Flask, FastAPI
- **Database Systems:** PostgreSQL, MySQL, NoSQL (MongoDB)
- **Data Science & Machine Learning:** scikit-learn, PyTorch, TensorFlow/Keras, Hugging Face, Transformers, RAG pipelines, YOLO
- **Cloud Technologies:** AWS (EC2, S3, IAM), Cloud-based ML Deployment, GPU-enabled Compute
- **DevOps & Version Control:** Git, GitHub, Docker, CI/CD Basics, Linux
- **Specialized Area:** 3D Point Cloud Processing, LiDAR Data Analysis, Perception Pipelines, Industrial ML Systems
- **Embedded Systems & Control:** Embedded Systems Programming, Sensor Integration, Firmware Development, Real-Time Data Acquisition, Hardware-Software Integration
- **Engineering & Instrumentation Tools:** LabVIEW, MATLAB, Simulink, Data Acquisition (DAQ) Systems
- **Mathematical & Statistical Tools:** Linear Algebra, Probability, Statistics, Optimization, Evaluation Metrics
- **Other Tools & Technologies:** Jupyter Notebook, Conda, CUDA (foundational), OpenCV, NumPy, Pandas
- **Research Skills:** Experimental Design, Benchmarking & Evaluation, Data-Centric Experimentation, Rapid Prototyping, Technical Documentation, Research-to-Production Translation

HONORS AND AWARDS

- **Lambton Alumni Award – Best Outgoing Student** 2025
Lambton College in Toronto
 - Awarded to the graduating student demonstrating outstanding overall achievement across academics, research, leadership, and community engagement.
- **Presidential Award** 2025
Postgraduate Program Institution
- **Impact Recognition for Large-Scale AI Health Deployment** 2022
Logy.AI (Nex Fitzap Pvt. Ltd.)
 - Acknowledged for technical contributions to a production system that reached over two million users through real-world deployment.
- **Best Outgoing Student Award (INSPIRE Award)** 2020
Undergraduate Institution
- **Mahatma Gandhian Scholarship** 2016-2020
Undergraduate Institution
 - Recognized for consistent academic excellence and ranking at the top of the cohort for four consecutive years during undergraduate studies
- **INSPIRE Internship Award** Jul 2014
Department of Science and Technology (DST), Government of India
 - National-level academic distinction awarded to the top 1% of students nationwide based on board examination performance.

LEADERSHIP EXPERIENCE

- **Vice President / Technical Lead / Outreach Coordinator** Aug 2023 – Dec 2024
Google Developer Student Clubs (GDSC), Lambton College [🌐]
 - Led and coordinated student-led technical initiatives, workshops, and outreach activities focused on software development and data science.
 - Supported technical guidance and mentorship for peer-led projects and learning activities.
- **Secretary** Mar 2024 – Mar 2025
Student Council, Lambton College in Toronto
 - Represented student interests by acting as a liaison between students, college management, and student services, contributing structured feedback on academic and campus-related issues.
 - Supported student engagement initiatives through coordination of events, communications, and advisory committee participation, helping improve program quality and student involvement.
- **Technical President** Jul 2019 – May 2020
SEDS KCT (Students for the Exploration and Development of Space) [🌐]
 - Spearheaded a student technical chapter focused on space technology and aerospace engineering initiatives.
 - Coordinated project teams, workshops, and technical discussions to promote applied engineering and research exposure.
- **Team Lead** Sep 2019 – Jun 2020
Industry Research Cell (IRC), KCT
 - Led student research teams collaborating with industry partners to address applied engineering and societal problems.
 - Acted as a liaison between academic mentors, students, and external stakeholders.

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

- **Google Developer Student Clubs (GDSC)**-Lambton College 2023 – 2025
- **STEM Fellowship** Outreach Team Member – Data Science Committee 2024 – 2025
- **Students for the Exploration and Development of Space (SEDS)** India - KCT Chapter 2018 – 2020
- **Industry Research Cell (IRC)** Research Cell - KCT 2019 – 2020
- **SAE International**-All-Terrain Vehicle (ATV) Student Design Competition 2016 – 2019

ADDITIONAL INFORMATION

Languages: English (Professional), Tamil (Native) **Interests:** Books, pitching ideas, stargazing, community volunteering